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AND

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Shade Trees in Cities.

"DOWN with the Ailanthus!" is the cry we hear on all sides, town and country, —now that this "tree of heaven," (as the catalogues used alluringly to call it,) has penetrated all parts of the union, and begins to show its true character. Down with the Ailanthus! "Its blossoms smell so disagreeably that my family are made ill by it," says an old resident on one of the squares in New-York, where it is the only shade for fifty contiguous houses. "We must positively go to Newport, papa, to escape these horrible Ailanthuses," exclaim numberless young ladies, who find that even their best *Jean Maria Farina*, affords no permanent relief, since their front parlors have become so celestially embowered. "The vile tree comes up all over my garden," say fifty owners of suburban lots who have foolishly been tempted into bordering the outside of their "yards" with it—having been told that it grows so "surprising fast." "It has ruined my lawn for fifty feet all round each tree," say the country gentlemen, who, seduced by the oriental beauty of its foliage, have also been busy for years dotting it in open places, here and there, in their pleasure grounds. In some of the cities southward, the authorities, taking the matter more seriously, have voted the entire downfall of the whole species, and the Herods who wield the besom of sylvan destruction, have probably made a clean sweep of the first-born of celestials, in more towns than one south of Mason and Dixon's line, this season.

Although we think there is picturesqueness in the free and luxuriant foliage of the Ailanthus, we shall see its downfall without a word to save it. We look upon it as an usurper in rather bad *odor* at home, which has come over to this land of liberty, under the garb of utility* to make foul the air, with its pestilent breath, and devour the soil, with its intermeddling roots—a tree that has the fair outside and the treacherous heart of the Asiatics, and that has played us so many tricks, that we find we

* The Ailanthus though originally from China, was first introduced into this country from Europe, as the "Tanner's Sumac"—but the mistake was soon discovered, and its rapid growth made it a favorite with planters.

have caught a Tartar which it requires something more than a Chinese wall to confine within limits.

Down with the Ailanthus! therefore, we cry with the populace. But we have reasons beside theirs, and now that the favorite has fallen out of favor with the sovereigns, we may take the opportunity to preach a funeral sermon over its remains that shall not, like so many funeral sermons, be a bath of oblivion-waters to wash out all memory of its vices. For if the Tartar is not laid violent hands upon, and kept under close watch, even after the spirit has gone out of the old trunk, and the coroner is satisfied that he has come to a violent end—lo, we shall have him upon us tenfold in the shape of suckers innumerable—little Tartars that will beget a new dynasty, and overrun our grounds and gardens again, without mercy.

The vices of the Ailanthus—the incurable vices of the by-gone favorite—then, are two-fold. In the first place it *smells horribly*, both in leaf and flower—and instead of sweetening and purifying the air, fills it with a heavy, sickening odor;* in the second place it *suckers* abominably, and thereby over runs, appropriates and reduces to beggary, all the soil of every open piece of ground where it is planted. These are the mortifications which every body feels sooner or later, who has been seduced by the luxuriant outstretched welcome of its smooth round arms, and the waving and beckoning of its graceful plumes, into giving it a place in their home circle. For a few years, while the tree is growing, it has, to be sure, a fair and specious look. You feel almost, as you look at its round trunk shooting up as straight, and almost as fast as a rocket, crowned by such a luxuriant tuft of verdure, that you have got a young palm tree before your door, that can whisper tales to you in the evening of that "Flowery Country" from whence you have borrowed it, and you swear to stand by it against all slanderous aspersions. But alas! you are greener in your experience than the Tartar in his leaves. A few years pass by; the sapling becomes a tree—its blossoms fill the air with something that looks like curry-powder, and smells like the plague. You shut down the windows to keep out the *unbalmy* June air, if you live in town, and invariably give a wide berth to the *heavenly* avenue, if you belong to the country.

But we confess openly, that our crowning objection to this petted Chinaman or Tartar, who has played us so falsely, is a patriotic objection. It is that he has drawn away our attention from our own more noble native American trees, to waste it on this miserable pigtail of an Indiaman. What should we think of the Italians, if they should forswear their own orange trees and figs, pomegranates and citrons, and plant their streets and gardens with the poison sumac tree of our swamps? And what must at an European arboriculturist think, who travels in America, delighted and astonished the beauty of our varied and exhaustless forests—the richest in the temperate zone, to see that we neither value nor plant them, but fill our lawns and avenues with the cast off nuisances of the gardens of Asia and Europe.

And while in the vein, we would include in the same category another less fashionable but still much petted foreigner that has settled among us with a good letter of cred-

* Two acquaintances of ours, in a house in the upper part of New-York, are regularly driven out by the Ailanthus malaria every season.

it, but who deserves not his success. We mean the Abele or Silver poplar. There is a pleasant flutter in his silver lined leaves—but when the timber is a foot thick, you shall find the air unpleasantly filled every spring, with the fine white down which flies from the blossom, while the suckers which are thrown up from the roots of old *Abeles* are a pest to all grounds and gardens, even worse than those of the Ailanthus. Down with the Abeles!

Oh, that our tree planters, and they are an army of hundreds of thousands in this country—ever increasing with the growth of good taste—oh! that they knew and could understand the surpassing beauty of our *native shade trees.* More than forty species of Oak are there in North America, (Great Britain has only two species—France only five,) and we are richer in Maples, Elms, and Ashes, than any country in the old world. Tulip trees and Magnolias from America, are the exotic glories of the princely grounds of Europe. But, (saving always the praiseworthy partiality in New-England, for our Elms and Maples,) who plants an American tree—in America? And who, on the contrary, that has planted shade trees at all in the United States, for the last fifteen years, has not planted either Ailanthuses or Abele Poplars? We should like to see that discreet, sagacious individual, who has escaped the national extasy for foreign suckers. If he can be found, he is more deserving a gold medal from our horticultural societies, than the grower of the most mammoth pumpkin, or elephantine beet that will garnish the cornucopia of Pomona for 1852.

In this confession of our sins of commission in planting filthy suckers, and omission in not planting clean natives—we must lay part of the burden at the door of the nurserymen. (It has been found a convenient practice—this shifting the responsibility—ever since the first trouble about trees in the garden of Eden.)

"Well! then, if the nurserymen *will* raise Ailanthus and Abeles by the thousands, (reply the planting community,) and telling us nothing about pestilential odors and suckers, tell us a great deal about 'rapid growth, immediate effect—beauty of foliage—rare foreign trees,' and the like, it is not surprising that we plant what turn out, after twenty years trial, to be nuisances instead of embellishments. It is the business of the nurseryman to supply planters with the best trees. If they supply us with the worst, who sins the most, the buyer or the seller of such stuff?"

Softly, good friends. It is the *business* of nurserymen to make a profit by raising trees. If you will pay just as much for a poor tree, that can be raised in two years from a sucker, as a valuable tree that requires four or five years, do you wonder that the nurserymen will raise and sell you Ailanthuses instead of Oaks. It is the business (duty, at least) of the planter, to know what he is about to plant, and though there are many honest traders, it is a good maxim that the Turks have, "ask no one in the bazaar to praise his own goods." To the eyes of the nurserymen a crop of Ailanthuses and Abeles is "a pasture in the valley of sweet waters." But go to an old homestead, where they have become naturalized, and you will find that there is a bitter aftertaste about the experience of the unfortunate possessor of these sylvan treasures of a far off country.*

* We may as well add for the benefit of the novice, the advice to shun all trees that are universally propagated by *suckers.* It is a worse inheritance for a tree than drunkenness for a child, and more difficult to eradicate. Even Ailanthuses and Poplars *from seed* have tolerably respectable habits as regards *radical* things.

The planting intelligence must therefore increase if we would fill our grounds and shade our streets with really valuable, ornamental trees. The nurserymen will naturally raise what is in demand, and if but ten customers offer in five years for the Overcup Oak, while fifty come, of a day, for the Ailanthus—the latter will be cultivated as a matter of course.

The question immediately arises, what shall we use instead of the condemned trees? What especially shall we use in the streets of cities! Many—nay the majority of shade trees—clean and beautiful in the country—are so infested with worms and insects in towns as to be worse than useless. The Sycamore has failed, the Linden is devoured, the Elm is preyed upon by insects. We have rushed into the arms of the Tartar, partly out of fright, to escape the armies of caterpillars and cankerworms that have taken possession of better trees!

Take refuge, friends, in the *American Maples*. Clean, sweet, cool, and umbrageous, are the Maples; and, much vaunted as Ailanthuses and Poplars are, for their lightning growth, take our word for it that it is only a good go off at the start. A Maple at twenty years—or even at ten, if the soil is favorable, will be much the finer and larger tree. No tree transplants more readily—none adapts itself more easily to the soil, than the Maple. For light soils, and the milder parts of the Union, say the middle and western states, the *Silver Maple*, with drooping branches, is at once the best and the most graceful of street trees. For the north and east, the Soft Maple and the Sugar Maple. If any one wishes to know the glory and beauty of the Sugar Maple as a street tree, let him make a pilgrimage to Stockbridge, in Massachusetts! If he desires to study the Silver Maple, there is no better school than Burlington, N. J. These are two towns almost wholly planted with these American trees—the sylvan adornings of wihch any "native" may well be proud. The inhabitants neither have to abandon their front rooms from "the smell," nor lose the use of their back yards by "the suckers." And whoever plants either of these three maples, may feel sure that he is earning the thanks instead of the reproaches of posterity.

The most beautiful and stately of all trees for an avenue—snd especially for an avenue street in town—is an American tree that one rarely sees planted in America*—never, that we remember, in any public street. We mean the *Tulip Tree*, or Liriodendron. What can be more beautiful than its trunk—finely proportioned, and smooth as as Grecian column? What more artistic than its leaf, cut like an arabesque in a Moorish palace—what more clean and lustrous than its tufts of foliage—dark green, and rich as deepest emerald? What more lily-like and specious than its blossoms—golden and bronze shaded? and what fairer and more queenly than its whole figure, stately and regal as that of ZENOBIA? For a park tree, to spread on every-side, it is unrivalled, growing a hundred and thirty feet high, and spreading into the finest symmetry of outline.† For a street tree, its columnar stem, beautiful either with or without branches—with a low head or a high head—foliage over

* Though there are grand avenues of it in the royal parks of Germany—raised from American seeds.

† At Wakefield—the fine country seat of the FISHER family, near Philadelphia, are several tulip trees on the lawn, over 100 feet high, and three to six feet in diameter.

the second story or under it—is precisely what is most needed. A very spreading tree, like the Elm, is always somewhat out of place in town, because its natural habit is to extend itself laterally. A tree with the habit of the Tulip, lifts itself into the finest pyramids of foliage, exactly suited to the usual width of town streets —and thus embellishes and shades without darkening and encumbering them. Besides this, the foliage of the Tulip tree is as clean and fresh at all times, as the bonnet of a fair young quakeress, and no insect mars the purity of its rich foliage.

We know very well that the Tulip tree is considered difficult to transplant. It is, the gardeners will tell you, much easier to plant Ailanthuses, or, if you prefer, Maples. Exactly, so it is easier to walk than to dance—but as all people who wish to be graceful in their gait learn to dance (if they can get an opportunity,) so all planters who wish a peculiarly elegant tree, will learn how to plant the Liriodendron. In the first place the soil must belight and rich—better than is at all necessary for the Maples—and if it *cannot* cannot be made light and rich, then the planter must confine himself to Maples. Next, the tree must be transplanted just about the time of commencing its growth in the spring, and the roots must be cut as little as possible, and *not suffered to get dry* till replanted.

There is one point which, if attended to as it is in nurseries abroad, would render the tulip tree as easily transplanted as a maple or a poplar. We mean the practice of cutting round the tree every year in the nursery till it is removed. This developes a ball of fibres, and so prepares the tree for the removal that it feels no shock at all.* Nurserymen could well afford to grow Tulip trees to the size suitable for street planting, and have them twice cut or removed before hand, so as to enable them to warrant their growth in any good soil, for a dollar a piece. (And we believe the average price at which the thousands of noisome Ailanthus that now infest our streets, have been sold is above a dollar.) No buyer pays so much and so willingly, as the citizen who has only one lot front, and five dollars each has been no uncommon price in New-York for "trees of heaven."

After our nurserymen have practiced awhile this preparation of the Tulip trees for the streets by previons removals, they will gradually find a demand for the finer oaks, beeches, and other trees now considered difficult to transplant for the same cause—and about which there is no difficulty at all, if this precaution is taken. Any body can catch "suckers" in a still pond, but a trout must be tickled with dainty bait. Yet true sportsmen do not, for this reason, prefer angling with worms about the margin of stagnant pools, when they can whip the gold spangled beauties out of swift streams with a little skill and preparation, and we trust that in future no true lover of trees will plant "suckers" to torment his future days and sight, when he may, with a little more pains, have the satisfaction of enjoying the shade of the freshest and comliest of American forest trees.

* In many continental nurseries, this annual preparation in the nursery, takes place until fruit trees of bearing size can be removed without the slightest injury to the crop of the same year.

THE CURCULIO WARFARE—A SUCCESSFUL BATTLE.

BY WM. STOKES, WEST PHILADELPHIA, PA.

DEAR SIR—In the September No. of the Horticulturist for 1851, you published an article over the signature of THOMAS W. LUDLOW, Jr., entitled "The Curculio versus Lime and Sulphur."

After reading Mr. LUDLOW'S account of his experiment, I concluded to try it myself this spring, and am happy to be able to say, that at present there is every prospect of its most perfect success.

I regretted that Mr. LUDLOW was not more particular in reference to the quantity of sulphur used, in proportion to the whitewash. I shall therefore give you an account of my experiment, which was as follows:

Immediately after the fall of the blossom, (May 18,) say when the fruit was about as large as an ordinary pea, I observed very many of the plums were already stung by the curculio; I therefore immediately procured a pailfull of whitewash, (cold,) mixed much thicker than is ordinarily used for white washing, and added a half pound of flour of sulphur, (and in this proportion throughout the experiment.) I then used a common tin garden pump for throwing the whitewash on to the trees, the nozzle of which was fully three-eighths of an inch in diameter, and in consequence a great deal of material was wasted in the application; this I repeated twice afterwards, at intervals of three or four days each. Hereafter I shall procure a rose to fit the pump, similar to a watering pot rose, by which I shall be able to cover the trees more perfectly, and at the same time prevent the lime disfiguring other plants in the vicinity.

About this time last year, there was not a single plum left on either of my trees—now, they are quite as full as I could wish.

A number of my plums, this year, have become semi-transparent, and fallen from the trees from time to time, although not stung. Is this caused by an excess of lime? But among all that have fallen that I have examined, I have found but *one* that had a worm in it; the wounds caused by the sting of the curculio have healed over smoothly, and do not penetrate more than a sixteenth of an inch.

Should this meet the eye of Mr. LUDLOW, I would be glad to hear from him in reference to his experiments this year, and particularly as to whether his fruit turned yellow and withered on the tree.

Some persons may be deterred from trying the lime and sulphur, on account of the unsightly appearance of the trees; to such I would suggest that a little green coloring matter might probably be added, without destroying the value of the compound.

I would also state in this connection, that myself and others have covered portions of our trees with musquito netting, to keep the rascals out; in most instances the fruit is badly bitten and destroyed, in others, where the netting was so close as to exclude him altogether, the fruit is not stung, but so little is left upon the tree as to render the experiment worthless. Yours respectfully, WM. STOKES.

West Philadelphia, July 8, 1852.

NOTES ON FORTY-FOUR VARIETIES OF STRAWBERRIES.

BY R. G. PARDEE, PALMYRA, N. Y.

We are just closing another highly favorable season of that beautiful and delicious fruit—the strawberry. The skies and the genial rains have been propitious indeed, and in no previous season have my petted vines yielded larger or more abundant fruit. More than twenty varieties in my garden presented me with specimens measuring four, and some six inches in circumference.

I particularly desired a favorable season, because I had quite a number of new varieties to test side by side with other standard kinds—and in order thereunto, had planted in the first place, on the 12th July last, a strong healthy plant of some thirty varieties, interspersed with an occasional plant of New Pine, Hovey's, &c., on a long bed running through a part of my garden—placing the plants about two feet apart. I then placed a few hills of the same varieties in rows in other parts of the garden, while the old plants, with a few runners attached, remained in masses around the original stools, so that each variety had a triple trial. My garden, small as it is, comprises in different parts of it, a light sandy loam, a coarse gravel loam, (where it is even stony,) and a stiff clay. It has not been manured, or even trenched, within five years, with the exception of two small beds as an experiment, which was no benefit—and yet in other soils I would manure freely, and trench deeply at right times, if needed, and most soils would need both.

I was careful to water and fertilize the plants on trial, alike in all respects, and for a fertilizer this spring, I used one pound each of sulphate of potash, nitrate or carbonate of soda, one-quarter pound sulphate of ammonia, together with say two pounds superphosphate of lime, and two pounds guano, in a solution with thirty gallons water—applied once in ten days or two weeks, until in flower, as last year.

The whole were mulched with tan-bark on setting out, and all the plants flourished, unchecked from any cause. Allow me to note some particulars of the different varieties.

1. *Burr's New Pine* has maintained with me its high reputation as a family fruit. All my visitors have united with me in giving it the preference in flavor, over all others, not excepting Swainstone Seedling, British Queen, &c. It has also borne largely, and the fruit has been good size, occasional specimens over four inches; besides we picked ripe fruit of this variety June 6, which was three or four days earlier than the Large Early Scarlet, Alice Maud, or any other variety in my grounds, and it supplied my table proportionably early, and this too without any coaxing.

2. *Hovey's Seedling* has done nobly, having borne specimens of the largest fruit again on my grounds, and it has also yielded good crops.

3. *Black Prince* has again borne finely, and exhibited beautiful specimens of large fruit. Occasionally I have found a berry which proved to be of the most exquisite flavor, but the majority of them have remained watery, and deficient in flavor. The largest, finest ones in appearance, were often the most deficient in flavor.

4. *Jenny's Seedling* has borne remarkably well for that variety, rather exceeding Hovey's in quantity, and only slightly below it in size—while it has proved, when fully ripe, to be of very high flavor—very juicy and sprightly.

5. *Monroe Scarlet*, one of Ellwanger & Barry's seedlings, has this season proved to be, under three separate trials, the largest bearer on my grounds. The plant on my single bed produced eighty large size berries on five long foot stalks—the largest berry

measuring four and three-fourth inches, but all were of fine size. The flavor was universally pronounced good. I have an expectation this will prove a valuable variety. Last year it bore well under unfavorable circumstances.

6. *Climax Scarlet*, another seedling as above, bore very well, and the berries were of a higher flavor still, although fewer in number, and smaller in size.

7. *Genesee Seedling*, (*s*)* another of E. & B.'s new seedlings, produced fruit of great beauty, but it did not with me equal in quantity, nor surpass in flavor, their Monroe Scarlet.

8. *Montevideo Pine*,(*s*) one of PRINCE'S seedlings, did not equal this year in size or flavor, my expectations; perhaps it may do better another year.

9. *Charlotte*, another of PRINCE'S, is one of fair size—a fair bearer on short foot stalks, and of delicious flavor.

10. *Lizzie Randolph*, another of PRINCE'S, is described in his catalogue as "*averaging larger* than Hovey's, round and very productive;" all this it has actually done the past season in my grounds, in all the three separate tests. Hovey's has given single specimens larger than Lizzie, and yet the average has been the other way; but on the point of flavor, Lizzie is decidedly *below* Hovey.

11, 12 and 13. *Prince's Primordean*, (*s*) *Estelle*, and *Cornucopia*—neither have answered the purpose at all this year. They may do better another year.

14. *Primate* (*s*) has done somewhat better.

15. *Profuse Scarlet* (*s*) has borne a good supply of fine flavored fruit, resembling the Large Early Scarlet.

16, 17 and 18. *Richardson Cambridge*, (*s*) Early and Late, have all done very well: the largest and highest flavored being the late. I am not quite satisfied that either of these have any superior qualities over other varieties which excel in size or flavor. We shall see.

19. *Princess Alice Maud* (*s*) has again borne tolerably early and well, and is also of good size.

20. *Lord Spencer*, (*s*) notwithstanding its very agreeable flavor, has so degenerated in size and productiveness, that I discard it.

21. *Roseberry;* (*s*) 22. *Miller's Seedling;* (*s*) 23. *Wild Strawberry;* (*s*) 24. *White Seedling;* (*s*) 25. *Stoddard's Seedling*, (*s*) and some others, I discard for same reason.

26. *Crimson Cone*, (*s*)† although quite acid without sugar, yet its productiveness and beauty render it quite desirable.

27. *Large Early Scarlet* (*s*) has borne larger and more fruit with me this season, than ever before. It is a good staminate to fertilize others.

28. *Boston Pine* (*s*) has done nobly this season.

20. *Royal Scarlet* (*s*) has borne quite a fair number of clusters of beautiful fruit, but alas, deficient in flavor, and is rejected.

30. *Rival Hudson* is one of the most productive market fruits.

31. *Willey* has borne next in quantity to Monroe Scarlet—yet I am not sure but it may be a competitor for productiveness; although of only medium size, yet it bears often sixty and seventy, and occasionally many more good berries, to a plant, and the fruit is of pleasant sprightly flavor, and hard for market.

32. *Prince of Orleans*, (*s*) bears very well under ordinary cultivation—only medium size, tender, rather pleasant flavor, and bears longer than usual.

* All the sorts marked (*s*) have *staminate* blossoms—those not marked have *pistillate*.

† Crimson Cone bears *pistillate* flowers—probably an error. ED.

33. *Swainstone Seedling* (*s*) has borne freely, and is a very rich and aromatic fruit, yet not so agreeable flavor as some other varieties.

34. *British Queen.* (*s*) I am not yet able to bring up the size of this fine fruit to compete with our English friends over the water—neither does it as yet bear well. I will try to do better with it another year.

35. *French Hautboy,* (*s*) like common Hautboy, a profuse bearer, with its peculiar flavor.

36, 37, 38 and 39, are *McAvoy's Superior, Longworth's Prolific,* (*s*) *Moyamensing Pine,* and *Walker's Seedling;* (*s*) have all borne fruit, enabling us repeatedly to test the fine rich flavor of each. The plants are also very vigorous; but I must wait another season before I can learn much about them.

40. *McAvoy's Extra Red* is very much in the same condition as the preceding, except inferior in flavor.

41. *Kitley's Goliah* (*s*)—could not test even the flavor, but it is now in blossom.

42. *Bicton Pine* (*s*) has borne me a few very large and beautiful specimens, of rich aromatic flavored fruit. It is the new strawberry from England; *white,* with a delicate blush on one cheek.

43. *Crescent Seedling* By a series of mishaps with this plant, I finally lost the whole of four successive importations from New-Orleans, after a part had finely started to grow here. The fifth order was more successful, and I have six or eight plants now growing vigorously in my garden, and striking runners freely—but I received them in May, in pots, and so am unable to report any test of them, as I ardently hoped *this season;* next season we will see if they continue to bear through July and August, as they do in New-Orleans.

I have some other new kinds on trial, one of which has considerably excited my expectations. I have also some fine seedlings in bearing, decidedly different from others, and yet I cannot see as they excel the old standard varieties in any important sense, and therefore they are unworthy of notice. If I had no strawberries, and wished to set out a bed for family use, with my present knowledge, I would select one fifth of them each of No. 1, 2 and 5; one-tenth each of No. 26, 27, and 28. Then add, perhaps, five or ten plants each of 3, 4, 10, 18 and 19, and of course try the new kinds, 36 to 43. For market I would largely add No. 30 and 31.

I have thus endeavored to give you an impartial account as I am able to do, of my observations on most of the varieties in bearing in my garden the past season, and am unconscious of having been biased in any way, by fear or favor. If injustice has been done to any one, I will cheerfully repair it, if another season's experience will furnish facts for the basis.

Again permit me to assure your readers that another interesting season's observations of the habits of the strawberry, has only confirmed me in the opinion that strawberries can easily be raised with us at a cost of not exceeding six to eight shillings per bushel, and the crop ought to be about as certain as a good farmer's crop of corn. Either are impatient of neglect, and both are alike certain to repay attention. The knowledge how to raise either, is easily learned in both cases, and good soil will raise both. R. G. P.

Palmyra, July 8, 1852.

ON THE CULTURE OF THE ACHIMENES.

BY ALPHA.*

NEARLY all the varieties of this lovely genus deserve to be ranked with the most beautiful and useful ornamental plants which our glass houses possess. Their flowers, of many delicate and pleasing shades of color, are produced in great abundance for months in succession, and the plants themselves are mostly of compact growth and easy culture. While in a growing state, all the varieties require the assistance of a rather warm and moist atmosphere, but during their flowering season, they may be removed to a cooler and drier situation, such as a close green-house or conservatory, where they may be said to be indispensable during the summer and autumn months.

As all the Achimenes increase rapidly by means of their scaly tubers, artificial propagation is almost unnecessary, except in nurseries, where it is perfectly understood. I shall, therefore, merely state that cuttings of the young wood, treated in the ordinary way, and placed in a brisk bottom-heat, will root freely. Taking it for granted that there is a supply of tubers at hand in early spring, they should be separated from the soil in which they have been wintered, and planted in shallow pots or pans, (the latter are preferable,) well drained, and filled with light sandy soil to within two inches of the top. The tubers should be laid rather thickly and regularly upon the surface, and covered with mold to the depth of an inch, or as much more as the pan will hold.

Water should be sparingly applied, only just sufficient should be given to keep the soil in a moist state. If active growth is desired without loss of time, plunge the pots or pans in a gentle bottom heat. When the plants are about three inches high, they should be carefully lifted from the soil, and potted in seven inch pots, placing twelve or more plants in a pot, according to the sized specimens that may be wanted. After potting, place them in a close and rather warm atmosphere, till they have become fairly established; a temperature of 60° at night, allowing it to raise 10 or 15° with sun heat in the day time, will be found the most congenial to the plants at this stage of the growth. As soon as they are established in their pots, air should be freely admitted on all favorable occasions, and the plants kept near the glass. If all goes on well, they will soon fill the pots with roots, when a final shift will be necessary. The size of the pots for this shift should be regulated by the size which it is desirable the plants should attain; ten inch pots will be sufficiently large where moderate sized specimens only are required: but for very large masses, twelve or thirteen inch pots may be used. Some first rate cultivators prefer deep pans for Achimenes, but these are better suited for plants to be flowered in a moist, warm house, than for those intended to be removed to the green-house or conservatory, during the flowering season. About twelve plants may be placed in a ten inch pot. It will be necessary to maintain a moist atmosphere, and keep the house rather close till the plants can lay hold of the soil; and water must be carefully supplied during this time, but the syringe may be used freely, if the weather happens to be bright. As soon as the plants start into free growth, after potting, air may be more freely admitted, and a slight shade during the forenoon of sunny days, will be found beneficial. Varieties of the habit of pedunculata, should be stopped as soon as they are established in their flowering pots; and if it is intended to train them in a formal manner, all the kinds should be staked before the shoots have become entangled. The stakes should be cut off the height to which the variety is

* From the London Gardeners' Chronicle.

likely to attain. They should be so arranged as to form the frame work of a handsome specimen, and the shoots should be kept carefully tied as they advance in growth. When it is supposed that the pots are filled with roots, an occasional watering with clear manure water may be given. Indeed I regularly water my Achimenes with weak manure-water, from the time they are well established in their flowering pots, till the blooming season is over, and I think that the plants are greatly benefitted by this treatment. If it is intend ed to remove the plants to cooler quarters while they are in flower, they should be judiciously and carefully prepared for the change, by giving more air, and gradually lowering the night temperature as much as circumstances will allow. When removed, they should be placed in the warmest part of the house to which they have been transferred, and guarded from currents of cold air; but if they can be kept in an intermediate house, the flowers will be larger, and the blooming season will be prolonged; still, a close kept conservatory will supply a suitable temperature, at least during summer and early autumn.

When they have done flowering they may be thrown to the rubbish-heap, merely preserving about two pots of each variety for stock; these should be kept sparingly supplied with water, and if they can be removed to a warm dry house, the ripening of the tubers will be better secured than under other circumstances. Water must be altogether withheld as soon as the leaves assume a sickly appearance, and when the tops die down, the pots may be removed to any dry situation, where they will be free from frost, and where they may remain till the tubers are wanted for starting next spring.

For soil, take light sandy turfy loam, peat, leaf-soil, and thoroughly decomposed cow-dung, in about equal proportions, to which add as much sharp sand as will ensure a free percolation of water through the whole materials. The loam and peat should be used in a rather rough state; and the dung should be broken up and intimately mixed with the sand before it is added to the compost. All the Achimenes are very impatient of stagnant moisture at their root; therefore secure perfect drainage by using plenty of potsherd, or lumps of charcoal; indeed, when pots are used, they may be one-third filled with draining materials.

ALPHA.

STRAWBERRIES AND THEIR NUTRITION.

BY A. GERALD HULL, NEWBURGH, N. Y.

PROFESSOR EMMONS, in his "Agriculture of New-York," makes this commentary:—"The soil must possess all the inorganic substances, as well as organic, which are essential to the perfection of vegetables; if any one is wanting it must be supplied."

This applies so forcibly to the strong common sense of every earnest cultivator in the great vegetable domain, that he feels at once the apparent truth of a rule, which asserts for its result the perfect development of every plant that is legitimately supplied, whether by leaf or root, with its full measure of organic and inorganic nutrition. This rule in its ultimates, I think, admits of exceptions.

Since Professor MAPES has advocated the use of tan-barks for a mulch for strawberries, asserting that the *tannic acid* was specifically indicated as an organic constituent of this fruit, his opinion has been canvassed in a spirit of denial, satire and ridicule. Still it may be true; and taking it for granted that the Professor's postulate is correct, the alleged advantages of the tannic acid for the strawberry prove that its efficacy is in an anomalous disproportion to that of the other recognized constituents of this fruit. Again, a refer-

ence to my remarks and experiments on the specific nutrition of strawberries, contained in the last August number of the Horticulturist, will disclose further collateral evidence of the caprices of plants in imbibing nutrition at proportional variance with their analyses. These discrepancies from the general rule, and the desire to awaken inquiry and experiment to the highest degree, in order to mature the finest fruit, have rendered me a little presumptuous, perhaps, in suggesting auother rule of specific nutrition:

That some fruits—whatever the organic or inorganic analysis of the plant, or of the fruit, may disclose and seem to require—possess one or more special constituents, each one of which is demanded as an increased, correspondent, and specific nutrition, that bears no proportion to that of the exact analysis.

It will be more satisfactory, in the consideration of this theme, to pursue the investigation in as radical and scientific form as possible, which will be best obtained by a survey of the few exact organic and inorganic analyses which have been so far afforded.

Inorganic analysis.—I am indebted to Mr. GEORGE RONALDS for the following analysis of the strawberry, made by THOMAS RICHARDSON, of England, quoted from page 318 of the "Annual Report of the Progress of Chemistry and the allied sciences, 1847–48."

	Fruit.	*Plant.*
Potassa,	21.07	38.65
Soda,	27.01	9.27
Lime,	14.21	12.20
Magnesia,	trace	5.85
Sulphuric acid,	3.15	5.89
Silicic acid,	12.05	2.58
Phosphoric acid,	8.59	15.58
Phosphate of sesqui-oxide of iron,	11.12	8.65
Chloride of sodium,	2.78	1.23
	100.00	100.00
Percentage of ash,	0.41	0.39

In the May number of the Horticulturist may be found the subsequent analysis of the strawberry *plant*, by Mr. BILIUS KIRTLAND, which is thus described. "One hundred and sixteen grains of the ashes were taken, prepared from the leaves and stalks, immediately after they had borne a moderate crop of fruit."

Silica,	6.117	grains.
Charcoal and sand,	3.101	"
Perphosphate of iron,	1.515	"
Lime,	26.519	"
Magnesia,	8.908	"
Sulphuric acid,	1.469	"
Phosphoric acid,	6.970	"
Chlorine,	.708	"
Potash,	33.154	"
Soda,	2.790	"
Carbonic acid,	23.008	"
Organic matter and loss,	1.739	"
	116.000	grains.

In the two analyses of the *plant*, the analysts coincide in the proportion of the *potash;* the discrepancy as to the other constituents is striking. In the analysis of the *fruit*, by RICHARDSON, the predominance of *soda* will excite some surprise, although the *potash*

holds a second and very important position. At the same time the united analyses of plant and fruit exhibit as the proportion of potash 59.72, and that of soda only 36.28.

Affirmative of the general rule. I stated last year, under the head of specific *inorganic* manures, that many strawberry plants apparently demand varied specific nutrition, as much so as different families of trees. A large bed was prepared and divided into three equal portions; one containing *potash* neutralized by muck; another *ashes* treated in the same manner; and last *phosphate of lime* (bone dust.) Lines of the same plants extended across the three soils. Boston Pine, Crimson Cone, Iowa, Burr's Seedling, Columbus, Rival Hudson, Late Prolific, Willey, British Queen, Myatt's Eliza, Victoria, Huntsman's Pistillate, Scarlet Melting, Ohio Mammoth, and Scioto, displayed a sturdy growth throughout this entire triple tract; at the same time they exhibited a positive preference for the potash over the ashes; for the ashes over the bone dust. The section of the triple tract, charged with potash, manifests an advantage this season much more conspicuous, the plants and the fruits having gained at least one-fourth over their associates.

Exceptional to the general rule. Directly opposed to the preceding results, however, Black Prince and Burr's New Pine became almost worthless in the same potash tract; while runners of 1850, transferred from these same plants to the natural soil of my grounds, well enriched with ordinary stable manure and street sweepings, have this year produced specimens of fruit nearly if not quite equal to their best reputation. Buist's Prize, also failed under potash nutrition, and developed the richest foliage and finest fruit in the department of phosphate of lime (bone dust.) Hovey's Seedling failed in a tract of phosphate of lime, yet rejoiced, with its luxuriant foliage and fruit, in a tract of soil supplied with *lime* as its main element.

William Cullen Bryant, Esq., who is equally at home, either in his town editorial chair, amid classic folios or political theses, or among strawberries or potatoes, at his cottage, so pleasantly nestling in the groves of Roslyn, has garnered into his pomological storehouse an extract which is quite pertinent at this moment:

Strawberries.—The following recipe for keeping old strawberry beds in bearing, is from the *Friend's Review*, a Philadelphia publication. What proportion of its efficacy depends on the frequent and regular watering, and what on the application of the nitre and glauber's salt seems uncertain:

"Those who know anything about the magnificent strawberries and the immense quantity of them raised in a bed 30 feet by 40, for several years past, in the garden formerly owned by me in King street, may like to know the process by which I cultivated them. I applied about once a week, for three times, commencing when the green leaves first began to start, and making the last application just before the plants were in full bloom, the following preparation: of nitre, of potash, of glauber's salt, and sal soda, each, one pound; of niirate of ammonia one-quarter of a pound—dissolving in thirty gallons of rain or river water. One-third was applied at a time; and when the weather was dry I applied clear soft water between the times of using the preparation—as the growth of the young leaves is so rapid that unless well supplied with water the sun will scorch them. I used a common watering pot and made the application towards evening. Managed in this way there is never any necessity of digging over the bed or setting it out anew. Beds of ten years old are not only as good, but better than those two or three years old. But you must be sure and keep the weeds out."—*Evening Post.*

Here it will be perceived that, of four equally proportioned ingredients, two are formed of potash, i.e. potash and nitre (nitrate of potash;) and two of soda, i.e. glauber's salt (sulphate of soda) and sal soda (carbonate of soda.)

Prof. J. F. W. Johnston, on page 328, of his "Agricultural Chemistry," in discoursing of carbonate of potash and carbonate of soda, states: "Many experiments have shown that both of these substances may be employed in the field with advantage to the grow-

ing crop." "In gardening, they greatly hasten the growth and increase the produce of the strawberry"—"Mr. FLEMING, of Barochan, has informed me that he found this to be the case with the common potash; and Mr. CAMPBELL, of Islay, with the common soda of the shops. They should be applied early in the spring, and in the state of a very weak solution.

These results confirm the experiments contained in Mr. BRYANT'S extract, if they did not give rise to them. And, while engaged with Prof. JOHNSTON on this subject, (page 329,) a very valuable practical conclusion may be derived to the amateur cultivator, as I know by experience, touching the efficacy of the carbonates of potash and soda combined with organic matter. "It is stated by SPRENGEL [*Lehre vom Dunger*, p. 402,] accordingly, as the result of experiment, that they are most useful where vegetable matter is plentiful, and that they ought to be employed more sparingly, and with some degree of hesitation, where such organic matter is deficient."

Touching the liquid applications, indicated by Mr. BRYANT and Prof. JOHNSTON, I ought to mention that Mr. DOWNING has been a long time an advocate of applying specific nutrition in *solution* to all fruit bearing plants during the fruiting process. The attributes are increased susceptibility to the plants at this period by which an appreciative receptivity of their special constituents is most sensitively and successfully sustained. The preferred times of application differ, the one preceding, the other attending the development of the fruit; but this may engender no material variance as to result, although my own experience accords with the opinion of Mr. DOWNING.

Under the "affirmative" record, the results, derived from the varieties there enumerated, confirm in the main the truth and value of the general rule for uniform specific nutrition. Potash, the major element of the analysis, holds the highest representation in the production of plant and fruit; ashes (potash and lime—the latter also an important substance in the analysis) present the next claim; and phosphate of lime (holding a questionable or minor place in the analysis) produces the least satisfactory impression. Yet the careful observer will perceive that the *potash*, alone, is quite equal to all the requirements of the plant and fruit in the department of *inorganic* constituents, and even here enforces its place as one of the special constituents, which is demanded as an increased, correspondent, and specific nutrition that bears no proportion to that of the exact analysis.

In the experiments, quoted by Mr. BRYANT, potash and soda were used in *equal* proportions. The result offers "magnificent strawberries" in "immense quantity;" and, what is of equal importance, *perpetuity* to the plants in the *same bed;* plants *ten* years old being in better condition than those of two and three years. According to the analysis of *fruit*, by RICHARDSON, the general rule of nutrition is more satisfactorily sustained here than in the other instances; while his analysis of *fruit* and *plant* gives the preference again to the potash, which, in the actual proportion applied to the plants, only equalled that of the soda. Agricultural chemists, e.g. Prof. JOHNSTON, there are, however, who might be cited to demonstrate the special rank to which the potash is entitled from "the more abundant presence of potash in the soil generally;" or from the probability of the soda being the correlative of potash to the extent of supplying its place as a constituent of nutrition; or from the soda and potash acting alike in *preparing* the food of the strawberry, by combining with and solving the vegetable matter of the soil. The experiments of Messrs. FLEMING and CAMPBELL confirm the reciprocal quality of substitution of these two alkalies for each other, either for direct or subsidiary nourishment of the strawberry.

The "exceptional" instances illustrate the extraordinary caprices of the strawberry plant, and naturally awaken conjecture as to the cause. It is not probable, although the

different varieties belong to one family, that these exceptional members would, in their analysis, exhibit different constituents which would harmonise with the prepared mineral manure? Or, is it not more probable, that these recusant plants are endowed with interior impulses, and secerning forces, by which, in accordance with the rule I have proposed, they prefer one or more constituents in excess, and utterly disproportioned to the rest, and thus elaborate through their elected media, their tempting and luscious products?

Organic analysis.—The only organic analysis I have at hand, I take from the "*Vollstandige Bibliothek oder Real Lexicon, Leipsic*, 1836." It represents the strawberry fruit to be organically composed of *citric* and *malic acids*, and a large proportion of *mucus sugar*, ("*schleimzucker*," glucose or grape sugar, I presume.) No allusion is here made to *tannic acid*; and I am not aware that there is any authority for sustaining the idea that these three acids, and grape sugar, may be substituted for each other; or that they have even the advantage of isomorphous bodies, admitting the questionable conjecture to be correct, that isomorphic bodies may erect a specific dynamic influence, as unerring in effect as their crystallization is uniform.

Tannic acid.—Professor MAPES—on making personal application to him respecting this acid, courteously replied to me in substance: "that *tannic acid* is contained in the cortical, or external surface of the *fruit;* that, by subjecting a *large* quantity of these surfaces to the appropriate chemical tests, he had detected the presence of this acid; that he attributed the flavor and fragrance of the strawberry, which belongs to this surface, to the specific property of this acid; and that he reiterated with confidence, his private and public assertion, that tannic acid applied to strawberry plants, in the proportion of one gallon of tan-liquid to one hundred gallons of water, made an evident and striking improvement in the size and flavor of the fruit." Here is a plain, straight forward statement, savoring of sincerity and truthfulness. Why should the existence of tannic acid in strawberries be questioned, then, until the cavillers offer, instead of words, their own analysis, to counterpoise that of the Professor! Irrespective of the analysis, a few experiments will be presented, which the reader is desired to scrutinize closely, and thence deduce his own conclusions.

Tan-bark mulch.—Mr. DOWNING, among others in this vicinity, has used the tan-bark as a mulch, and invariably with a marked benefit to their strawberries, over those ordinarily treated. Mr. CHARLES DOWNING informed me that he ate strawberries twenty years ago, taken from a tan-bark bed, that were then remarkable for their excellence. It will be answered, 'it is without doubt true, but the enhanced value of the fruit should be ascribed to the *mulch*, and not to the specific influence of the tannic acid.' I have proved the mulching by hay, straw, muck, charcoal and iron cinders, and yet have found no result equivalent to that of the tan-bark. My beds of British Queen, which I have heretofore nursed with extreme care, were mulched last year with tan-bark, and have presented this year an array of force and beauty quite equal to defy the sharp edge of the sternest skepticism.

Experiments with tannic acid and other liquids. I selected three rows of each variety of four different kinds of strawberries, which traverse my triple bed of inorganic manures, and made my applications in the subjoined order. The liquids were applied from May 18th to June 23d, twenty-five times, usually about sunset, the omissions being supplied by rain.

RIVAL HUDSON.

1. { Tannic acid—in the form of tan-bark liquor, one gallon to one hundred of water.
   Citric acid—the expressed juice of one lemon to four gallons of water.
   Malic acid—one pint of cider to four gallons of water.

June 22d. The strawberries nourished by *tannic acid*, exceeded the others in *quantity*. The fruit of the *citric acid* presented the largest average size. Three dishes of the fruit were subjected to the judgment of two ladies, who declared the strawberries of the *malic acid* to be the sweetest and highest flavored; those of the tannic acid 'next,' and those of the citric acid comparatively '*tart*.'

June 25th. Second picking. A gentleman essayed the three kinds, and his taste awarded the first preference to the fruit of the *tannic*, the second to that of the *malic acid*.

BURR'S NEW PINE.

2. { Tannic acid.—This and the subjoined acids were applied as described under Rival Hudson.
Citric acid.
Malic acid.

June 22d. The *quantity*, as with the previous fruit, favored the *tannic acid*. The *citric acid* fruit ranked second as to quantity, and first as to average size. The same ladies, in tasting this fruit, again selected the *malic acid* specimens as the richest flavored, giving the second choice to those of the tannic acid. June 25th. The *quantity* again sustained the tannic acid. The same gentleman decided in favor of the tannic acid flavor, and preferred that of the malic next.

BURR'S OLD SEEDLING.

3. { Tannic acid—one gallon of tan-liquid to one hundred gallons of water.
Manure water—the manure liquid of the barn-yard.
Spring water—water from an adjacent pond.

June 22d. The measurent, also, of this fruit, gave the advantage in *quantity* to the tannic acid, the second place to the spring water. The manure water produced the greatest number of the *largest berries*.

July 3d. Three dishes of fruit were submitted to the gustatory judgment of Dr. JAMES GILBERT, of Savannah, and Mr. ROBERT COLGATE, of New-York. The labels were purposely removed, and the trials were made at two different periods of the day. Their final decision was "that the three specimens of fruit exhibited a marked and peculiar flavor, sufficient to distinguish them apart; that *tannic acid* examples were the most luscious and artificial; those of the spring were the next best and most natural; and those of the manure water were, also, more artificial, but not so palatable."

COLUMBUS.

4. { Tannic acid—tan-bark liquid, diluted as before described.
Poudrette water.
Spring water.

June 22d. The *tannic acid* bed produced the greatest *quantity*. The spring water specimens exceeded the others in average size.

July 5th. The tannic acid examples, again surpassed the others in *quantity*, the poudrette assuming the second position. Two gentlemen and a lady made trial of the berries of this variety, and pronounced in favor of those nourished by *tannic acid*.

Specimens of the above named varieties of fruit have been sent to Mr. DOWNING—the labels intentionally omitted—with a desire that he would arbitrate on their respective claims, to which he kindly assented.

[We find on referring to our notes, made with Dr. HULL'S numbered samples of Burr's New Pine and Rival Hudson before us, the following: No. 1, highest and best flavor; No. 2, good but inferior; No. 3, less good—somewhat watery. These now prove to have been fed as follows: No. 1, tannic acid; 2, citric acid; 3, malic acid.

In the other samples we found the sample "No. 1" (which now proves to have been stimulated by the tan liquor) uniformly the best. The others were variable, No. 3, (spring

water,) having the least flavor, and in the case of Columbus—a scarlet strawberry of not much flavor—the first was rendered somewhat bitter, which is now explained by the over-watering. ED.]

The experiments being completed, the organic analysis may now be opportunely recalled. Citric and malic acids and mucus sugar are presented as the main constituents; and to supply the requirements of the strawberry, according to the rule of Prof. EMMONS, these three of the organic substances liberally contributed, should be all sufficient to mature the finest form of fruit. Still, Prof. MAPES has presented the tannic acid as *another* constituent. In order to test this predicate, and the comparative powers of the citric and malic acids, I made the preceding experiments with scrupulous attention.

Citric acid.—Lemon juice was the most convenient representative of this acid, and well diluted with water, exercised no deleterious influence on plant or fruit. In both instances of Rival Hudson, and Burr's New Pine, it seemed to increase the *size* of the fruit, and to increase its *acidity*.

Malic acid.—The most convenient substitute for the pure acid was *cider*, diluted with water. In referring to Rival Hudson, and Burr's New Pine, the trials of taste rendered a preference on the part of two witnesses for this acid, of another for the tannic, placing the malic second. This reduces the contest to these two acids, which may possibly contribute additional force to the value of the tannic. Thus, instead of pure malic acid, cider was applied. "Cider," according to the analysis of Dr. J. H. Salisbury, "*Patent Office Report*, 1850–51—*Agriculture*"—contains alcohol, sugar, gum or dextrine, *malic acid*, and the phosphates and sulphates of the alkalies, with a little *tannic* and gallic acids." Here arises an important query—how much of the flavor, allowed to the malic acid, must be attributed to the tannic acid which the cider contained?

Mucus sugar.—I regret extremely that I did not subject some of my plants to experiments with this substance, which, however, I intend to do another season. Prof. DRAPER states—"when a solution of grape sugar, containing lime, is kept for some time, the alkaline reaction of the lime, finally disappears through the formation of *Glucic acid*. It is soluble, deliquescent, of a sour taste, and yielding, for the most part, soluble salts." By applying, repeatedly, a solution to the plants in a soil nourished by lime *glucic acid* would probably be formed, and how far it may hold an important relation to the nutrition of or specific impression on the strawberry may then be determined.

It has also been stated that the value of the tannic acid application was dependant on the liquid and not on the tan, and that simple water was equally efficacious. Therefore manure water, poudrette water, and spring water, were essayed side and side, subject to the same exposure in every respect, and the results were carefully watched and recorded. The theory of the virtue of tannic acid was, in consequence, submitted to a careful, candid, and severe ordeal to determine the truth, and to furnish the best practical lesson for the cultivation of strawberries.

Manure water berries, exceeded in average size in the trial of Burr's Old Seedling. *Spring water* produced the greatest number of the largest fruit in the experiments with the Columbus. *Poudrette water* fruit gained in quantity over the spring water. The three substances held an inferior position to the tannic acid as to *quantity*.

Tannic acid—It must be conceded, allowing the previous recorded experiments, that a free application of this acid has produced unequivocal effects; that it has surpassed *all* the competing substances in creating *quantity*, and imparting *flavor*.

At the same time, the decision in regard to flavor may be liable to exceptions, as judgments are necessarily more or less capricious, owing to circumstances; some always pre-

fering sweet, others acid fruits, the sense of taste varying at one time from that at another, &c. Canvassing this topic with reference to accurate results, it must be admitted, if the existence of tannic acid be granted, that it maintains but a very moderate quantitative position as a constituent in the analysis of the fruit alone. If there be then, but a *trace of tannic acid* in the strawberry, while the other constituents exist in a large proportion, this, among the organic substances, is one which is demanded as an increased, correspondent, and specific nutrition, that bears no proportion to that of the exact analysis.

A rule of action now naturally flows to the practical cultivator. In developing the most valuable qualities of the strawberry, he *may* use all the constituents of the organic and inorganic analyses, consulting his convenience and economy; but he *can* perfect the finest fruit in abundance and richness, by selecting *potash* from among the inorganic, and *tannic acid*, from among the organic constituents of this delicious gift from the "Giver of all good."

A. G. H.

Newburgh, N. Y., July 15, 1852.

REMARKS.—Dr. HULL'S record of his careful experiments with special manures for the strawberry, deserves the attention of cultivators. We may add, for the information of those who know nothing of the soil, that it is naturally a heavy, and rather poor clayey loam, on a gravelly subsoil—by no means calculated by its fertility and friability, to favor the cultivator of delicate fruits; and notwithstanding this, the crop obtained by Dr. HULL'S various modes of culture, has been surprisingly large. The beds of most varieties on a very large strawberry patch, were literally loaded with the finest fruit.

The nice cultivator will find a good deal in our correspondent's detail of experiments to stimulate him to make extended experiments; but the *practical results for general use*, which we deduce from the foregoing article, and our observation of the strawberries themselves, are these. 1st. The best preparation for strawberry beds is to have the soil well trenched and manured with stable manure, mixed with a liberal supply of *leached* ashes —that substance supplying both potash and soda in sufficient quantities, (fresh ashes has more lime and far less potash—the latter being largely added by the soap boilers.) 2d. The finest and most delicate of the Pine Strawberries—which usually fail in this climate, may be grown perfectly by the aid of a good mulching of fresh tan-bark. 3d. Tan-liquor diluted adds to the flavor of strawberries—but we are confident that when *fresh* tan is applied in the autumn as a covering to the beds, sufficient tannic acid finds its way into the soil by means of the rains, to answer this purpose. Notwithstanding—as a straw berry crop is always greatly increased in size and quantity by watering the plants, it is better to water them with tan-liquor, one part to one hundred.

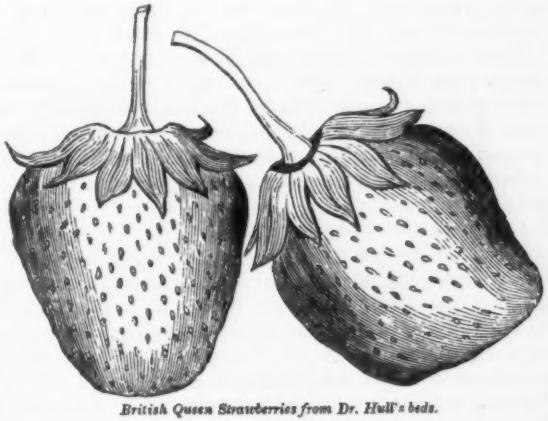
A great deal has been said and written by our horticultural friends at the west, about the absolute worthlessness of all the large *Pine* Strawberries of Europe, such as British Queen, Keen's Seedling, &c.,—which bear mostly what are called *staminate* blossoms, as being barren, and never yielding more than half a crop in the United States; and their place has been in a good degree supplied with varieties of the *scarlet*, (native strawberries, such as the Hudson, Iowa, Willey, &c.—bearing pistillate blossoms, and producing enormous crops with little care, in this climate.

And as most persons have found it difficult, from the greater heat of our climate burning up the plants, to cultivate the pine strawberries, and easy to cultivate the Scarlets, the latter have pretty nearly supplanted the former in our gardens. Yet, in Europe, where both grow equally well, no one thinks for a moment, of comparing the flavor of the two, and we never saw Scarlet strawberries served at a good table in Europe—but always Pines. For our own part, we consider (comparatively) the Hudson strawberries,

with which our markets are mostly filled, *poor sour things*, only fit for preserving—and such fruits as Willey, Columbus, Iowa, Neck Pine, (no pine at all,) and most of the other heavy bearers that, as we understand, fill the great strawberry market of Cincinnati, are no better.* They are when compared to fine flavored pine strawberries, what a sour cooking apple is to the finest Newtown pippin—or the acid Malagatune peaches that fill New-York markets to delicious Rareripes—or poor Teneriffe to the best pale Sherry. But so long as we were denied by our climate the satisfaction of cultivating any others, we were forced, of course, to be contented with sour Scarlets.

Dr. HULL'S great success with the British Queen, the most productive and delicious of the Pine strawberries (a fruit to be found at every private table and good hotel in the north of Europe, averaging three to four inches in circumference,) has been so remarkable, and the reason for it is so simple that we predict from it a revolution in strawberry culture; and this result has been had too in the face of a very dry and exposed site—where this same strawberry invariably pushes up in summer if cultivated in the common way. And the whole secret of his success in growing this and the other most delicious pine strawberries—such a Goliath—Schiller, Myatt's Eliza, &c. is nothing more than to make the soil rich and *keep the beds cool in summer and warm in winter by a mulching of two or three inches of fresh tan-bark.*

The adjoining cut is an accurate representation of British Queen Strawberries, taken from Dr. HULL'S beds, and not selected but chosen of the average large size. The flavor was higher, and the color richer and darker than any specimens that we saw in England in 1850—though fruit nearly twice this size is by means unusual there. In our own garden we had nearly as good results with less care, and this season, in order to satisfy ourselves that these sorts hitherto considered too delicate for our hot climate, were really rendered hardy by the tan mulching, we planted two beds,—mulched one and left the other bare, in the usual way. It is now mid-summer—the mulched bed is very luxuriant and healthy; the unmulched shows the usual half-burned and starved appearance, common to the European Pines in this climate.



British Queen Strawberries from Dr. Hull's beds.

As we know our friend Mr. LONGWORTH, of Cincinnati, is the sworn foe of the staminates or Pine strawberries—afflicted with utter want of faith in their power of giving a crop, and the staunch friend of the pistillate Scarlets, knowing them to bear abundantly, we requested our neighbor Dr. HULL to set apart some average hills or patches in his beds of British Queen, and keep an account of their product for the benefit of such skeptics.

* Hovey's Seedling and Burr's New Pine, are exceptions—not Scarlets—but apparently a cross between Scarlets and Pines—by far the best strawberries for this climate in general cultivation—but not equal in flavor to the true Pines.

The result was an average of 164 *berries* to each hill of 20 inches square—a result, considering the large size of the fruit, that we think will satisfy even our Cincinnati friends.

We predict an increased cultivation for the high flavored pine strawberries, and hope for an abundant—particularly by amateurs of many of the Scarlet sorts. Market growers who can command good soil and plenty of tan-bark, will find one bushel of British Queens or Goliaths will command more in the market than three bushels of Hudsons. Their firmness renders them well adapted to carriage. We close this long article with a note of Dr. HULL'S, relating to his cultivation of this variety, which will commend itself to amateurs. ED.

British Queen.—Last autumn I applied a mulch of tan-bark, span-roof form, up to the tops of the plants. Previously, poudrette and street sweepings were worked in freely on either side of the rows. In the spring the tan-bark was levelled on either side of the plants, which, protected from sun and cold, looked as vivid as in the autumn. Subsequently an additional coat of tan was applied about three inches thick. The runners were allowed to grow pretty freely last season, for the benefit of my friends, which gave me rows of plants sparsely scattered instead of hills at three feet distances. It then occurred to me that this strawberry, under our scorching summer sun, might enjoy the protection of partial shading of its own leaves with decided advantage to its fruit. I have been justified in the result, and however much I may have heretofore admired this fruit; I pronounce it without hesitation, to be the finest staminate yet proved; and for *beauty, size, flavor*, and *productiveness*, I prefer it to any *pistillate* I have seen or tasted among eighty varieties of strawberries. The tannic acid liquid was occasionally applied to the plants during their flowering and fruiting season. The fruit was among the earliest to ripen and the latest to produce, being furnished nearly four weeks.

Product.—Six hills or sections of this strawberry—twenty inches in diameter, afforded forming, maturing, and ripe fruit, as follows: 1. 182; 2. 183; 3. 129; 4. 164; 5. 152; 6. 176; averaging 164 berries to each hill. A. G. H.

FRUIT CULTURE IN UPPER GEORGIA.

BY TESTIS.

THE remarks of several correspondents in the July number of your paper, on the subject of Fruit Culture at the South, have induced me to throw together a few thoughts on the subject, which are the result of my own experience and observation.

I have several times been surprised at the complaints made through your columns, against fruit trees of northern growth or origin. I live between the 32d and 33d degrees of north latitude, about sixty miles west of the city of Macon. My orchard comprises about thirty of the most popular varieties of the peach and nectarine, and so far from blooming out of season, or casting their fruit, I would gladly stipulate to have only a third of the fruit on the trees, which is yearly set. The late frost this year destroyed so much of the young fruit, that I supposed myself to be safe against the calamities of overbearing. Not so. A loud crash advertised us a few days ago of the fall of at least half of one of my best peach trees, with its rich burden within a few days of perfect ripeness! One of the *few* varieties which seem to be exempt from this objection, is a *native*. It is the "Columbia," (well known in northern nurseries,) obtained direct from Columbia

county, where it will be found in great perfection. The "Lemon Cling," also of *southern origin*, does not suffer so much—while "George 4th," "Newingtons," "Prentiss' Red Cling," and others, break down. "Van Zandt's Superb" is in perfection with us now, (July 10,) measuring from nine to eleven inches in circumference. I do not believe that peaches will succeed at the south near the coast, and this may be one reason why they fail in Mobile. I know a gentleman within a mile of the city of Savannah, who has a large orchard, well stocked with fine varieties. His trees look remarkably well, and set fruit abundantly in the spring, but he has never matured any of consequence. To the fine varieties of foreign apples named by Mr. WHITE, as succeeding well at the south, I would add the "Red Astrachan" and "Boston Russet." A clerical friend residing near Griffin, (about fifty miles north of this,) told me in 1849, when fresh from the Boston Fair, that he could have beaten their finest Russets with fruit from his own trees. My trees are young, but the "Yellow Bellefleur" and Gravenstein promise well, in addition to some others not generally known here.

As for Pears—judging from the favor in soil and climate, asked in your work on "Fruits and Fruit Trees," for many varieties, and the perfection in which they are easily produced here, I have arrived at the conclusion that our's is the better climate for this fruit. The gentleman to whom I have alluded above, imported about seven years ago, the following varieties of Pear, all on Quince roots. "Louise Bonne de Jersey," Beurre de Amalis, Citron de Carmes, Passe Colmar, Easter Beurre, Beurre Diel, Glout Morceau, Vicar of Winkfield, Doyenne Gris, and one other by mistake, without a name. He planted them in a close brown chestnut soil. He pruned the branches but little, and never touched the roots. In five years the trees, (which were small when planted,) were in full bearing, and with the exception of one, which is diseased, they produce yearly as much fine fruit as they can hold. But what will you think when I tell you that his "Easter Beurre" is in perfection here early in October! The Vicar of Winkfield" ripened earlier. My own trees are all young. Among those in bearing are Dearborn's Seedling, Louise Bonne de Jersey, Citron des Carmes, St. Ghislain, Julienne, Rushmore, Andrews, Beurre de Capiamont, Compte de Lawry, Buffum, Seckel, Knight's Monarch, Bartlett, Femish Beauty and Napoleon. Many of these are on quince roots.

I observe that your correspondent, Mr. PARDEE, distinguishes between the fertilizers which produce the vine, and those which promote fruitfulness in the strawberry. I visited Doctor BAYNE in October last, and procured, in his neighborhood, a few genuine plants of Alice Maud Strawberry. I planted them out in November, and they have given me nothing except most luxuriant vines. They were treated with guano and barn yard manure. Burr's Mammoth, planted at the same time, but not highly manured, has produced fruit abundantly. Perhaps I have fallen into the very error to which your correspondent alludes. With other varieties I succeed well. Doctor BAYNE'S cabbages, of which he speaks, had probably ceased to grow, before they were overtaken by the severe frost of the last most extraordinary winter, and were indebted to that circumstance for their preservation. The thermometer stood with us 26 degrees below the freezing point, and I lost hundreds of cauliflowers and cabbages, all in a growing state, and either headed or heading.

I had rose bushes, for the first time in my life, killed to the ground, and Lilliputian Chrysanthemums, which I planted out in November. These plants were all in a growing state, and I suppose on that account were killed. Every Fig tree I own, embracing eight or ten varieties, was killed to the ground, with the exception of a variety known here as the Celestial, but which I think is the Angelique. Almost every peach tree was injured

on the same side of the trunk. I cannot impute this to the sun of last summer, as some which have suffered most were shaded by branches reaching to the ground.

Two questions now, Mr. Editor, and I have done. What is the "sulphate of ammonia?" Not a druggist in the little town in which I live, knows anything about it. I should like to know by what name to order it, the form in which it comes, and its probable cost. [It is only to be had of the wholesale druggists in the cities. ED.] How does it happen that particular soils are recommended for some varieties of the Pear? Should not the soil be adapted to the *stock on which we work*, rather than to *the tree we aim to produce?* [Certainly, to the stock. ED.] Our success with the pear on the quince in heavy soils would indicate this. TESTIS.

July 10, 1852.

We are much obliged to our correspondent, in whom we recognize one of the best cultivators at the South. It gives us a new feeling of the breadth of our country, to know that before strawberries are ripe at the northern part of the Union, peaches are in perfection at the other. Our correspondent's trouble with his peaches—i.e., their breaking down with the abundance of fine fruit, will please the fancy of some of our British readers who find it hard enough to make the fruit hang on at all. ED.

CRITIQUE ON THE JUNE HORTICULTURIST.

BY JEFFREYS.

American versus British Horticulture.—Out of rule, Mr. DOWNING. Don't you know that our new "Code of Practice" has expunged the *versus* altogether from the title's of causes? However, as you are *not* a lawyer, you will hardly be "thrown over the bar" for wrong pleading or mal-practice, in the Court of Horticulture, unless it be for the very truth-telling habit you sometimes indulge in, a specimen of which we have in this article.

If our people who require the services of foreign gardeners, would only do themselves justice, one-half of the intollerable exactions that are made upon their purses and their patience, by sundry of those imported empirics, would be abated. Of "Native American" gardeners, we have none. Gardening is too "piddling" work for them. "Cut and burn" is the meaning of the word "improvement," over a great part of the United States, while plant and prune may be the work of some less enterprising, and more painstaking ones than themselves.

Gardening and professional gardeners, are, in fact, subjects of modern introduction, to any extent in the United States; and in but few of the states now, is professional gardening considered of much account. The only "gardener" I knew in my boyhood, was a superannuated old negro, with white hair, and eyes so old that a little halo of gray encircled their pupils; and this worthy old African, called Cudjoe, used to itinerate over the neighborhood soon as the early spring broke out, and as he knew the difference in the soil and locality of the dozen or twenty gardens, which he had for the last forty years anuually made, he took the warmest and earliest places to begin with. His *role* of "doing up the garden," consisted mainly of sowing a few lettuce seeds in an early border; an onion bed laid out in "square," and a row or two of early peas. This being done, his labors were dispensed with, except that the "young Missuses" might now and then want a posey bed for their "four o'clocks" and "Marigolds," when old Cudjoe's services might be spun out for another half day. After all they were pleasant times, and many snug gardens,

stored with excellent vegetables, and decked with pretty flowers, succeeded the quiet labors thus began by the harmless old negro.

Since then we have "progressed." Now we want extensive gardens, hot-beds, greenhouses, and all sorts of queer conceits reqniring the continued labors of skillful men—the "continued labors" we get, as the collapsed condition of our purses testify; the "skillful" part is altogether another matter. The simple truth is—I must blast it out—we Americans do pay through the nose, most outrageously, in most cases, for our gardening, and the majority of it villanously bad at that. I have tried many "gardeners," myself, and I never tried one who made great professions of what he had "done at 'ome," and had been in high practice there, but what vilely cheated me—that, probably, was *my* "luck." Others, perhaps, found better; yet I have been most successful when I found a plain, laboring man, who had been nothing but an "under laborer" in *good* gardens abroad, and made little or no pretensions of skill, and was satisfied with moderate wages. Among such, I have found now and then, a faithful, skillful man, who, in his plain and quiet practice, knew more than a score of your vaporing, empty "professors."

Nor, so long as things go on as they do with our own people, do I see any help for these difficulties. We must *know something* ourselves, and then, with such "help" as we can get, rub along in a very plain way, and enjoy what we can of luxury in the enormous proportionate expense which we pay for it. Let it be understood that my remarks are not intended for *all*. We have many good gardeners among us—honest men, and skillful, who are thoroughly taught, and practice on sound principles. Such men deserve and meet with abundant encouagement, either in the employ of others, or when in business on their own account. I wish a few more "professional" gardeners would read the Horticulturist. It would be to their benefit.

Effect of the Severe Winter on rare Evergreens.—With all my heart I wish we had more such men as Mr. Sargent. Men who will try things, and then, after trial, tell us what they have amounted to. Many a man of taste is disposed to try a new plant, or a variety of plants in his grounds, but on thinking the subject all over, his fear of failure overcomes his zeal, and he prudently buttons up his pocket and concludes to save his money and his solicitude, rather than hazard both on a doubtful issue. These notes of Mr. Sargent are particularly valuable for several reasons. His position is a central one, exposed to great vicissitudes of change in temperature. His soil not *naturally* inviting and grateful to the evergreen family at large. His variety extraordinarily extensive for this country—and the past winter, from which his notes are drawn, the most severe of modern date. These circumstances combine to make the notes of Mr. Sargent, with the editorial memoranda accompanying them, of exceeding interest to all evergreen planters.

Microscopic insects the cause of Pear Blight.—No, sir. We fear growers cannot admit that doctrine yet. The work of insects always gives token of mischief before the work of death is done. The pear blight does no such thing. You may walk out among your trees at evening, the branches fresh with the greenest leaves, and the young twigs in their most succulent growth, and the next day noon will show you one of the same branches withering, brown, and dead. That is *fire blight*. We know not what strange anomalies exist in Illinois, above and beyond our other states, but if report be true, the "old French pear trees" of Kaskaskia, and other early settlements of that state, are now as fresh and luxuriant as those of Detroit and the river Raisin. Let us wait a little and see what our other pomologists have to say upon this *new* theory of Prof. Turner.

Great variety of Native Woods.—It is amusing to an intelligent man who has much intercourse with our landholders and farmers, to note how little the most of them know

of the prodigious forest wealth with which they are surrounded, even on the soil owned by themselves. Go to a man living in our middle and western states, and ask him how many varieties of wood grow upon his estate, and he will, in all honesty, tell you that he has perhaps a dozen altogether, and these comprise such as he makes into his ox yokes, whippletrees, sled crooks, hoops, handspikes, withes, whip-stocks, framing timber, boards, rails, fence posts, and fire wood; and if there be any more varieties than these, they might as well grow at the north pole as on his own territory, so far as any interest which he takes in them is concerned. Now, it appears that this little penisula of forty acres, on examination, produces sixty species of native woods! What a wealth of tree vegetation on so small a spot! And yet, this piece of ground is sterile, compared with many of equal territory to be found in the United States.

"O! would some power the giftie gie us,
To see ourselves as ithers see us,"

in the wealth of our extensive and luxuriant forests! Bartram, Michaux, and Nuttall, with all their research, have not revealed the extent of our woodland treasures, and there is yet a wide and a new field for the naturalist unexplained in the vast solitudes of Oregon, New Mexico, and the Californias. Even the bleaker and inhospitable shores of Lake Superior abound in woods new to our books, which may yet reveal to us productions of surpassing interest. It is gratifying to see, now and then, in your columns, our attention directed to such rich and refreshing subjects.

Evergreens—their use and Culture.—If Mr. Richardson preaches as well as he writes, his hearers are to be envied. There is a positive unction in this article that goes to the understanding, if not to the heart, of every one interested in growing evergreens, or who loves country life at all. His treatment of this subject is thoroughly practical, and as simple as practical; so plain, and seductive withall, that one can hardly resist the disposition to go forthwith into a sturdy plantation of firs and cedars.

I have thought a thousand times of the great additional good which our country clergymen could do, in the way of their "duty," if they would cultivate a love for horticulture and planting, and preach that, on week days in their parochial visits among their peo ple, as episodes interspersed among the "more important subjects" usually confided to their charge. I have, in the course of my life, known some country clergymen, long resident among a rural population, whose influence in such subjects have been most beneficial and lasting. Beautifully shaded avenues, luxuriant court yards, delightful flowers, grand overshadowing trees, blooming orchards, and rich gardens, have grown up under their teaching, and the influences of their refined taste, equally with the pure morality and sincere devotion which surrounded the altars of their own hallowed sanctuaries. How delightful and salutary the influence of such a man among an improving people, and how many of the rural paradises of our country can point to the labors of a faithful pastor, as one who taught them, both by precept and example, how to create the beauty and the luxuriance with which they are surrounded! The very subjects which so deeply interest his calling—his early classic studies—his daily readings of volumes in which the most exalted lessons of instruction are illustrated by reference to objects of surpassing interest and beauty—his simple, natural, yet cultivated taste; all these draw his thoughts into a deep love and attachment to the harmonies of creation, which, if he be a man fit for his calling, cannot but tell out in such works of grace and embellishment. Labors like these, constitute a marked feature in the "daily beauty" of a pastor's life, and more forcibly illustrate that purity of purpose, and sanctity of example, which should, and do in so many familiar instances, signally distinguish the life of the country clergy.

I must even, while in the vein, refer to the many eminent men, scattered all over the United States, distinguished in the several neighborhoods of their residence for their fine taste in gardening and planting, as well as for their more popular attainments, who received their school-boy education at their home firesides, and whose minds and tastes, were formed under the teachings of the devoted clergy of the rural parishes of our older states, at whose "studies" they daily or weekly attended for years, while deprived of the advantages of public classical schools in their own secluded neighborhoods. Their restricted means did not permit them to enjoy—fortunately for their own success and fame in after life—the advantages of "academical" education; but with strong minds, sound hearts, and determined purposes, they went forth into the world, from the wholesome teachings of their parish "minister" to become, in due time, the strong men of our country.

Things are not so now—and none the better that they are not. Were they so, we might witness less brilliancy, but more integrity, honesty, strength and virtue. God bless the country clergyman!

Sacred and Classical Planting.—No one can read this delightful essay, and meditate upon it as he reads, without breathing freer and deeper, and rising up a wiser and a better man. Our deepest associations of sublimity, grandeur, and beauty in natural objects, are drawn from the writings of inspired men. The Pentateuch, the Prophecies, the Lamentations, the Psalms, the historic records of the Old Testament, all abound with the grandest, as well as most delightful illustrations of which the mind has ever conceived; while the simple and touching narratives of the New Testament, abounding in similitudes to natural objects, surpass in simplicity, in beauty, and directness, any uninspired book of ancient or modern time. A thousand examples might be quoted in proof; and let him who doubts—if haply, such there be—go search the Sacred volumes, and there ponder and admire.

The Next Pomological Congress.—Now that every fruit grower who has attended the meetings of this body, has had his own particular hobby recognised and put into print, I trust that some *methodical* system of action is to be adopted to govern their future proceedings. Various reports will probably be presented for examination; some pertinent to the object, some the reverse—some pure grain, and much chaff. Let strong committees of reference be selected, who can separate the one from the other, and report only what is valuable, and to the purpose. The varieties of fruits themselves, their best localities, soils, positions, climates—all indeed, appertaining to them, should be discussed, considered and settled, so far as they can be. Much has been already done—finished, indeed, so far as the subject can admit of it, and *new* matter should now come up for consideration. Philadelphia is a most favorable point for the meeting, and large delegations from many of the states will be in attendance.

Such gentlemen as have had experience in the previous meetings of this body, may give to this convention great directness, and the results of their deliberations may be of exceeding value. Let a plan early be adopted for publishing the *gist* of their labors in a book form, which need not be expensive, and its treasury will be liberally repaid from the sales which may be made of its copies. If this body is to be continued, and hold future annual or biennial meetings, it should have its "Transactions," as much as any State Agricultural Society; and if got up as they should be, the record will be indispensable to every pomologist and nurseryman, in guiding his future practice.

An English National School-house.—A quiet, quaint, homelike affair, which, under the deep shade of ancient Elms, looks the very spirit of repose and meditation. But there

are too many buttresses and leantos about it, to suit our "fast" notions in America, and it will rarely, if ever, be copied out of England. Besides that, the gables should be more deeply sheltered by the projecting eaves, indispensable to the due protection of the walls in our climate. With such addition, it would be a fitting model for a country school house in this country.

Dr. Valk's Native Grape.—The July Horticulturist having come to hand before this, I shall reserve what I have to say on this grape, to couple it with the new seedling of Mr. ALLEN, of Salem, Mass., and perhaps another *new* thing or two of the sort.

Glover's Models of Fruits.—In these beautiful and useful specimens is shown what a gentleman of taste and leisure can do—partly for the amusement of his leisure hours, and incidentally to furnish such

"Imperishable types of of evanescence"

to all who love to see their favorite fruits in perpetual color and bloom before them. Such specimens should be in the possession of every society who have cognizance of fruits, and Mr. G. is entitled to the lasting gratitude of every pomologist, for his ingenuity and patience in producing them.

JEFFREYS.

ON SUMMER PRUNING HARDY GRAPES.

BY C., LOUISVILLE, KY.

DEAR SIR—In the August number of the Horticulturist for 1846, you present Doctor Lindley's theory of pruning grape vines, and recommend as the result of your experience, the omission of summer pruning—neither to remove the laterals, nor to stop the fruit bearing branches, unless the vines be too thick, when you remove a portion of the branches with the fruit entire. Has any recent experience induced you to modify or change the opinion there expressed, respecting summer pruning in open culture? Your correspondent "H. G.," in your last number, on the culture of grapes under glass, directs the shoots to be "constantly stopped a joint or two above the fruit." This severe pruning is no doubt required under glass.

Mr. LAWRENCE YOUNG, a horticulturist of some experience, in the May number, page 208, speaks of severe summer pruning of the fruit bearing and lateral branches as the only correct practice, acknowledged to be so by all Cultivators, and says that "every body does or may know it to be the proper culture." The writer of this is not satisfied that the culture is correct, though he has given the subject attention during the last eight years.

One of our successful cultivators on a small scale, has grapevines in this city, twenty-seven years old, reared from cuttings by himself, which are planted seven feet apart, trained to an upright trellis eight feet high; these vines are pruned in the spring, on the renewal system, allowing three or four canes of the last year's growth to remain, which are trained in short curves, at full length to the trellis; other branches he cuts down to two eyes, to form bearing wood for the next year, then he permits them to grow in a straight diagonal direction until they reach the top of the trellis, when he bends them over and stops them after they have grown about eighteen inches in a downward direction on the opposite side. All the wood that has borne fruit is cut out the following spring. The fruit bearing shoots from the wood of the previous season, are allowed to grow freely until they reach the top of the trellis, when they are stopped, the lateral shoots from these are not stopped or cut off.

The only summer pruning the vines receive is that above described, together with the removal of a few leaves when they cause too dense a shade over the fruit. His Catawba and Isabella vines, are confined in a space of six feet by eight feet high, and are every season loaded with fruit, from within eighteen inches of the ground to the top of the trellis. The berries are of good size, though the bunches are not quite so large, as may be obtained when a Catawba vine is permitted to run twenty to thirty feet, and bear its fruit on the end, as some amateurs here fancy to train their vines, the bare stems having the appearance of old cordage hung about from prop to prop, with a mass of verdure attached to the end. In return for this unsightly mode of culture, they certainly do obtain a few larger bunches of grapes, than I have seen produced in the open air under any other mode of culture. You will oblige your correspondent, by saying whether the experience of the past six years has changed the opinion of the mode of summer pruning, recommended in your journal in August 1846. Respectfully, C.

Louisville, Ky., July 9, 1852.

Our opinion relating to vines out of doors is substantially the same: that is to say, we advise every leaf to be left, and only stop the fruit bearing branches when they become so long as to become unmanageable—i.e. fill up the trellis or stake too much. The severe system of pruning out of door vines is both unnatural and unsuited to our climate. Under glass the vine is placed under artificial conditions and may be successfully subjected to various modes of pruning and culture.

In cultivating Isabellas and Catawbas for fruit (not wine) in the garden or field, two things are most important. The first is to give the roots—to the very ends—in the autumn, an immense top dressing of *stable manure* (digging it in well,) for no tree needs so much animal matter as the grape; the second is to prune the vine very closely, carefully and thoroughly in the early spring or at the close of winter. These two things will always secure a fine crop of very large fruit. Summer pruning is only a secondary—though still important matter. Ed.

THE GOLIATH STRAWBERRY.

Among the various new strawberries that have been tested for two years past, the Goliath appears to be the finest of that class usually called *Pine* Strawberries.

We believe the Goliath is a German variety, introduced into this country by Messrs. Thomas Hogg & Son, Yorkville Nurseries, New-York. At any rate, our first acquaintance with it was through some plants sent us by these experienced and skillful nurserymen—who commended the sort to us as one which had acquired reputation on the continent, and promised well under their own cultivation.

The advantages of the Goliath over most of the Pine strawberries, appear to be its greater hardiness and adaptation to our climate. We have found the plants to stand the past severe winter well, without any protection, and to bear an abundant crop. Notwithstanding this, we would recommend a mulching of tan-bark two inches deep, as calculated to improve both the vigor of the plants, and the size of the fruit.

Our neighbor, Dr. Hull, (of whose success in strawberry culture we have repeatedly spoken,) has grown the Goliath to very great perfection this season, and the sketch of a cluster of the fruit of this variety, which we give in the annexed figure, is one taken from his plants. The remarkably high vinous flavor of the Goliath, added to its hardiness and

vigor, will, we think, cause it to be sought after by amateurs. It is superior for general cultivation here, to any Pine we have tried, with the exception of the British Queen—while it is hardier than the latter fine variety.

Description.—Fruit large, ovate, pretty regular and uniform in size, (not cockscomb shaped;) surface of berry not highly polished; seeds only slightly imbedded; color, rich red; flesh, solid, with a high vinous flavor; quality, first rate in all respects. Fruit stalk tall, strong, unusually hairy; calyx quite hairy. Leaves borne upright, on long, rather slender stalks. Hardy, and bears abundantly. Ripens at middle season.

ILLINOIS HORTICULTURE—INSECTS—PROF. TURNER, ETC.

BY DR. KENNICOTT, NORTHFIELD, ILL.

DEAR SIR—In your July number, I find a letter from that excellent western pomologist A. H. ERNST, of Cincinnati—commenting on Prof. TURNER'S discovery of insects, supposed to be the cause of *blight* in the pear, &c.

I had the pleasure of reading the Professor's June article, in his own house, at Jacksonville, and I also examined his apparently healthy remnants of a noble lot of pear trees, cut up by the blight of preceding summers. He could show me no vestiges of his "pear

tree fiends," though he thought that their presence could be detected by a blotched and slightly diseased appearance of the foliage.

I would say, at the commencement, that I am skeptical on this subject of the insect origin of blight, and believe with Mr. Ernst that we are to look to the sudden and extreme changes of temperature, and perhaps other meteorological phenomena, for the immediate or exciting cause. But I do not believe that the enfeebled constitution of foreign trees is the only, or chief predisposing cause—for our native as well as foreign shrubs, and hardy indigeneous trees are subject to its attacks.

There is, as yet, no blight in my vicinity this summer, except in the burr oak (*Quercus macrocarpa*) and it is due to the believers in the insect theory, that I state the fact of the comparative absence of most kinds of injurious insects in the orchard and garden—the scaly aphis excepted. We have had very few rose bugs even—not one where we formerly had one hundred. And this was the case during my recent visit to central Illinois.

There was, however, plenty of blight about Springfield, and regions north, though none that I saw in Prof. TURNER'S neighborhood. I therefore fear that his exemption is accidental, rather than owing to his zealous manipulations and varied applications to the bark of his trees.

Professor T. deserves great credit, nevertheless, for his untiring exertions in this connection, and his very careful and expensive experiments. Profit to himself in this matter seems to be lost sight of, in his ardent determination to add something important to the science of Horticulture. And yet, Prof. TURNER *is* a money making man. He will pardon me for this statement, because it is the best evidence that one can offer the world, of any man's practical talent, sanity, and sound orthodoxy. It is proof positive that he is all right, thought it has been the fashion among "the Doctors" in Illinois, to style the professor "a reckless innovator and a wild visionary"—especially in regard to "a plan for an Industrial University for Illinois"—for noticing which, as you have done, we of Suckerdom can never feel sufficiently grateful or thank you too much.

Now, whether Professor T. has made any new discovery in entomology or not, I cannot say—for I have never studied this most important science, and though I sought it, have not been able to procure a copy of Dr. HARRIS' Treatise on Insects; I trust, however, that his new edition will be sufficiently large to enable western fruit growers, and the many reading farmers who have recently inquired for it, to obtain copies. But friend ERNST will permit me to assure him of one thing. Professor TURNER'S "mite of mould," which he presumes to be the nest of his "Pear Devil" is *not* the "bark louse." The scaly insect does not attack the pear tree—at least not here—though the apple is often perfectly encrusted with these scabby little pests. The white scale insect is found on stunted apples and pears too, but I saw no signs of them on the trees about Jacksonville.

Still it is possible that this insect and the nest seen by Prof. T. and Dr. ADAMS, are well known to entomologists—for though the one is a very learned man, and a most patient and persevering observer, and the other one of the best chemists in the west, and a man of great general scientific information—yet I am not aware that either makes pretension to an intimate knowledge of entomology—and I am compelled to doubt the deductions of Prof. T., while I admit them to be very plausible and even possible.

While writing (as my intended brief note has already grown to a letter,) permit me a word about your able Illinois correspondent, and the rich central Illinois region, which I do not remember that he has described, though he resides in its most favored spot.

Though an old correspondent I never met Prof. Turner before—and, as many of your

readers may have done, I had formed no correct idea of the man. I had been told that he was a "hobby man,"—"a visionary theorist," and all that sort of thing—and perhaps some of your readers may have thought the same, for he never hides his opinions; and their singular boldness, if not originalty, and his forcible manner of stating them, have startled his brethren, the school-men, and they are, consequently, more inclined to fear than to love him, though he has really made an hundred friends to one enemy; and if they would only read him right, and "the signs of the times" too, they would see in him as great a friend to relgious institutions, and polite letters, as to practical and scientific education.

J. B. TURNER is a thoughtful man, but no "visionary"—an innovator—but no "leveler." He is not even an enthusiast—but an earnest scholar—a learned and pious theologian—strict in his example, and yet liberal in his views; and the most *earnest* and unselfish man I ever knew, in his desire to give the producing classes a liberal education, suited to their wants, and to the practical requirements of their several vocations.

I wish his detractors knew him as he is. I wish your readers could see his little place, and his manangement of it. His implements and machines, most of them of his own invention or improvement, and the manner in which he uses them—and how much he makes of, and how much he makes *from*, a few acres. They would then see that he is just the sort of a man to write for the Horticulturist, and the man to evolve and develop great practical thoughts, and to sustain them.

Jacksonville is the city, par excellence, of public edifices, and the great state charities. It is the classical town, and with many, the show town of Illinois; and it is a most lovely spot—though here, as elsewhere—

"God made the country—man made the town."

The country is rich and beautiful, beyond the power of words to describe. The red drift, or diluvial soil, is astonishingly deep and productive, *twenty successive crops* of Indian corn, (60 to 80 bushels to the acre,) having been taken from the same field, *without manure.*

The face of the country is not broken, nor is it rolling, but just sufficintly sloping for easy culture, with an occasional elevation to break the vastness of a prairie view, which too often stretches away beyond sight, unrelieved by hills or trees.

Here, however, are some "mounds," and a plenty of timber, bordering the still streams, and clothing the range of elevated land which encircles the town, in the richest and most graceful dress imaginable.

We have no *picturesque* spots to speak of, and few trees of the picturesque type, though no country can surpass ours in the *graceful* school of trees, and in the gentle curves and swelling outline of much of our prairie land—its vastness and sameness being at once its principal beauty and defect. But about Jacksonville there is nothing like monotony—the landscape is varied, and the variety of trees and their forms, and the changing face of the general surface, are enough to prevent any idea of sameness.

Maples, Elms, and six noble sorts of Oak, make up the great mass of trees, and yet there are so many others, especially of the smaller sorts, that a prairie "island," or a "timber" border, resembles the show grounds of some old nurseries East, with specimens of nearly every beautiful and graceful deciduous shrub and tree.

But enough of the country—except the HEDGES, and not much of them. There are hundreds of miles of new Maclura, or Osage Orange hedges, through the whole of this central Illinois region—and yet, I saw but *one* that would turn stock of all kinds, and that had grown up too rapidly, and not thick enough at bottom for future use. Prof. T.

has some hedges commenced *right*—they turn chickens, and would almost turn a rat now—and hereafter they bid fair to be as impenetrable as a brick wall, and as formidable as a hedge of Cherokee rose, in Louisiana.

The great fault every where committed, is in *not cutting back enough*. The hedge looks dense and formidable at two or three years old, and the proprietors "*hate to mutilate it.*" But they *must cut* and keep cutting, or they will never have a fence—that is clear to me—and yet, except upon Prof. TURNER'S grounds, I did not see ten hedges that had been half cut—nor three that had been cut enough. [Quite right—for the first three years the only thing is to cut down the hedge, till it gets thick at the bottom. ED.]

There were, as near as I can learn, about 30,000,000 of this hedge plant raised in Illinois, last season, and there will be perhaps fifty millions this—and these will make a "right smart chance of fence, if well planted and severely cut back—but I fear ten planters will curse the plant grower, where one will bless him; and all from their own neglect or folly—for I know that most dealers in hedge plants are very particular in their directions to "cut and keep on cutting." Almost every promising native or foreign plant has been tried for hedging and all abandoned, or nearly so, except the Osage Orange; and I fear the majority of the existing hedges of that will prove a failure, from the fact above stated, and not from any fault as yet discovered, in the nature of the plant itself, or in our soil or climate as regards its cultivation.

I noticed among trees that had been parts of a hedge once, the Honey Locust, (*Gleditschia,*) and in Prof. TURNER'S grounds are several tall specimens of the thornless variety—a half picturesque and very desirable tree. I did not see it with the moon-beams sifting through its feathery foliage, but the Professor described the sparkling shower of light thus produced, as most delicious, and entirely unequalled in its singular appearance. This variety should be oftener planted.

The architecture in Jacksonville, I ought to say before closing, is not of a high order. Many faults, and some bad ones, in the old public edifices—but better taste, and more knowledge, are shown in the new.

There are many new suburban cottages, a credit to the place. I asked the origin of so much taste, and was told that all might be traced directly to your COTTAGE RESIDENCES and the HORTICULTURIST. A compliment to you, Mr. Editor, and well deserved. Truly your friend,

JOHN A. KENNICOTT.

The Grove, Ill., July 10, 1852.

GREEN CROPS FOR MANURE.

BY JAMES GOWEN, MT. AIRY, PHILADELPHIA.

A. J. DOWNING, Esq.—Dear Sir: On the score of sound practice in agriculture, rather than of courtesy to me, I claim the privilege of saying a word in relation to the strictures in your last number, upon my remarks on "Green Crops as a Manure." I do not complain that you took occasion to animadvert upon anything thing you found worthy of noting in my Agricultural Address at Lancaster, being well aware that it was perfectly at your option to single out for comment, whatever you might deem objectionable. Acknowledging, also, that I have no right to expect every one should concur in my views, upon a matter as susceptible of a difference of opinion, as the condition of farms and the position of farmers differ—the circumstances being the rule by which to determine the necessity or propriety of turning in a crop to serve as manure.

In my address, in which the turning in of green crops was merely incidental, it could not be expected that the special cases, justifying a resort to such manuring, could be enumerated—I could but deal with the subject in a broad and general sense, and from a long and close observation on the practice of husbandry, a sense of duty constrained me to denounce the custom of raising crops to be plowed under, as "time wasting and land cheating." No one, not even yourself, Mr. Editor, can have a higher appreciation of vegetable mold than I have, and I challenge New-York, or any farm in Pennsylvania, to show better sods on uplands, after having yielded for as many years, heavy crops of hay, than I can now show upon my place; and may safely add, that I am yet to meet the man who would rejoice more in having such a sod to turn under, when it becomes necessary to break it up; but with all this appreciation, I would not rely upon it to bring me a crop of grain, potatoes, &c., without the addition of what is known among farmers as "barn-yard manure," notwithstanding such a sod would be richer and more enduring than the "scant crops of partly grown clover, buckwheat, &c," which I pointed at as unworthy the name of manure. Had these fields I have mown for some seven or eight years, been laid down in 1833 and 4, with only clover or buckwheat, and the like, turned in, would they, as they did, have yielded forty to forty-five bushels of wheat to the acre, as first crops, and cut ever since close on two tons of fine hay, on an average, to the acre?

Assuredly not. In the course of two or three years at farthest, the crop of clover growing, would be required to turn under, to serve as manure for a grain or some other crop, involving prematurely the labor of breaking up, seeding, &c.; and what would be the condition of the land, and the character of the crops, after another two or three years shift under such a practice—I allude to such soils as we cultivate? It was in view of this system that I said, "in whatever place it is practiced, however strong the land may be at the start, the system, if persevered in, must inevitably bring the land, its owners, and the country, into a state of poverty. No good husbandman would think of pursuing such a course."

If the address had been fairly read, its general bearing and scope properly considered, it might, perhaps, have saved you and others from drawing the inference, that I held clover and other green crops worthless as fertilizers. I never so thought, nor did I intend to be so understood. I knew clover would in some degree serve the purpose of manure, and so would potatoes, wheat, rye, barley, &c. &c., but I knew also that these, as clover, would be costly and but indifferent manures, compared to barn yard manure, peat, and putrescent substances, which if not used to enrich the land, would become pestilential nuisances; for we must have cattle and other live stock—while offal and other offensive matter would be constantly accumulating. Insisting, as I did, upon the crops going to the barn, to be put to their proper use, and the offensive matters applied, as they should be, to the land; and in this, who shall be so unthinking as to say, I was wrong? Moreover, I had been grieved to perceive a germ of quackery springing up with our efforts at scientific agriculture, and while I attempted to awaken the good farmers of Lancaster to a proper spirit of improvement, I took occasion, husbandman like, to caution them against nostrums and humbug, urging a chief reliance upon the cheap and excellent manures so easily obtained in and about their barn yard and premises.

To the question whether I have seen the statement of Mr. More, in regard to his premium farm—I answer that I have; and, instead of condemning his practice, have simply to say, that had I been in his situation, I might, perhaps, have resorted to the same means, he had recourse to for the improvement of his land. But did Mr. More depend solely upon the turning in of green crops, pending the process of renovating it? I presume he

used other manures, which with gypsum, aiding in restoring his farm to good condition. But this case, and and others I have heard of, do not affect the force of the injunction against a persevering system of turning in grain crops as a substitute for manure. It may be that this very land that Mr. MORE found so wretchedly impoverished, when he took possession of it, owed much of its poverty to his predecessor having followed more closely the appliances of clover, buckwheat, &c., by way of manure than Mr. MORE did—one thing at least is certain, and that is, the impoverishment was not owing to the former owner or tenant having been too liberal in the application of barn yard manure.

Now the best way to test the soundness of my views, as to the system I so deprecated, would be, for some one having a farm in such good condition as Mr. MORE'S is now found to be in, to follow the green crop system thoroughly for five years, discarding the vulgar practice, if you please, of husbanding barn yard and stable manure. To note the seasons consumed in raising the crops to be turned under, to produce the "carbon," "oxygen," "nitrogen," &c.—the simon pure fertilizers required to grow the wheat, rye, corn, potatoes, &c. &c., for the barn—to keep an exact account of the value of the crops so housed, together with the sum total of the expenses of the farm, and then to exhibit the net gain in the "yellow boys" that are now jingled in "Mr. GOWEN'S" ears, to convince him of the profits resulting from the turning in green crops instead of manure; and if such a system, on such a farm, at the end of five years, leaves the purse well filled and the land in as high condition as at the beginning, I shall not only confess that I was wrong, but be willing to pay a premium of half the value of the farm to the husbandman who had worked such a miracle.

Let it be rembered that it was such land, as this, not worn out land that I had in view, as may easily be perceived by my remarks, for how could the land be brought "into a state of poverty," that had not been rich, but in poverty already? If, Mr. Editor, you will take the trouble to again glance at the address, from which you have predicted that if I go on at the rate you infer I am going, I will, as you say, "demonstrate that there is no warmth begotten by sunshine," you will be led to believe at least, that I am in but little danger of dealing in moonshine. Your obedient servant, JAMES GOWEN.

Mount Airy, Philadelphia, July 19th, 1852.

REMARKS.—We like the straight-forward spirit of Mr. GOWEN'S remarks, and find by them, that in the main point at issue we are entirely agreed. That is to say, if Mr. GOWEN simply wishes to affirm that there is no comparison in the value of barn-yard manure for keeping a farm in heart, and green crops, we say Amen, with all our heart. No person has a firmer faith in the value of barn-yard manure, than ourself, as we believe that with plenty of it, and the knowledge how to use it, one might smile, even at the bottom lands of the west. But, as Mr. GOWEN will not deny, that the said bottom lands are the most fertile lands in America, will he do us the favor to ask himself how they became such a store house of fertility? By the deposit and decay of animal remains? No. By the annual deposit for hundreds of years, of vegetable remains? Assuredly. Nature has been plowing in green crops every year, on those bottom lands, till they are most undeniably *rich*.

So far we think Mr. GOWEN will agree with us—that there is virtue in decaying and decayed vegetation buried in the soil, whether in the shape of clover plowed in or otherwise. But we now suppose from reading his remarks, with which he has favored us, in the above communication, that we have probably misapprehended him in another way. Mr. GOWEN is not only a good practical farmer, but an excellent teacher of husbandry, and in Pennsylvania and the states south of it he notices that farmers neglect their barn

yard manure to follow the new fangled fancies of plowing in green crops, using mineral manure, &c. He accordingly tells them that green crops, under such circumstances, are not worth their attention, which ought to be devoted to the permanent enrichment of their lands by the use of animal manure. And the advice is the best of advice. We look upon barn yard manure as the solid bullion, green crops, gypsum, lime, &c., as the paper currency of husbandry. But in many parts, we were going to say most parts of the country, the bullion is scarce—is only to be had in very limited quantities—so that not a half or third of the farm lands can be well manured with it. In such a condition of things a farmer who wishes to mend his land and not lose his profit, will, we think, occasionally employ the paper currency to maintain and restore the credit of certain fields that would come to a beggared condition, if they had to wait for the bullion. Barn yard manure, we say with Mr. GOWEN, before everything, but if we can't get enough of it, then we must not despise what the experience of so many good husbandmen has proved of decided benefit—green crops ploughed in. ED.

A TALK ABOUT PIGS.

BY L. F. ALLEN, BLACK ROCK, N. Y.

"PIGS! And what, I should like to know, have pigs to do with horticulture?" says an intelligent reader. Why a good deal to do with it, when a sharp-nosed street grunter of the Alligator tribe creeps under your fence, or through your gate, which some straggler has, perhaps, left half way open, and roots up a fine growing border of Dahlias just getting into bloom, or a bed of choice Tulips in the full opening of their luxuriant colors; or, in a better way, the domestic, quiet dam, and half a dozen little chubby responsibilities which you have turned into your plum orchard to destroy the Curculio's which so incessantly murder your fruit. In this last employment, your well-bred pig is a useful creature, and well tended, and properly secured from mischief, is rather an interesting animal than otherwise.

Pigs have been wonderfully improved in England within the last fifty years, and England is the country, except in fine wooled sheep, where the best of all our domestic farm stock is obtained. Let it be known, also, that many of our merchants and gentleman who live in cities, and have fine country places, have shown much more spirit and liberality in sending abroad, and getting such things for the improvement and benefit of the farmer, than a thousand of the very farmers so benefitted would show of themselves, and who usually give little thanks, even while acknowledging the benefit, to those who confer it upon them. For myself, however, I intend to make an exception to this truth, in the case now in hand.

Among my friends and acquaintances in New-York, is a merchant, an Englishman, but who has complimented the land of his adoption in the highest possible way, by marrying an American wife, and cultivating a beautiful little farm in Newtown, on Long-Island, where he resides. This gentleman has a taste for fine animals, and next to his carriage horses, nothing composing his outside family gives him so much pleasure, as to look upon his beautiful Short-horn cows, of which he has several, his Middlesex pigs, and his Dorking fowls. In returning a visit of his of some months previous, I last winter drove over with my friend, and spent a night at his most agreeable home. Being an active business

man in the city, I little dreamed that he had cultivated so nice and discriminating a taste for farm stock, and supposed that I should meet with some very tolerable things at his place, in the way of cattle, pigs and chickens; yet the *last* I knew to be good, for he had among them some of the choicest of a previous importation of my own. The *first* I also knew were fine, for he had selected some choice creatures from a herd into which I, myself, had dipped at a high figure. These were examined, commented upon, and praised as they deserved; but usually regarding a pig as a thing to be kept in a pen, out of sight, fatted, slaughtered, and put out of the way, I took less interest in them; yet learning they were remarkable in their way, I went with my friend to their stye—a proper, well arranged apartment, adjoining the stables; and what a sight! I no longer wondered that PRINCE ALBERT, the illustrious spouse of England's Queen, breeds Middlesex pigs, and takes prizes with them at the Royal Cattle Shows. There were the original pair imported the previous year, with their brood of nine young ones, fat as squabs, white as pigs could be, and more beautiful in shape, and more perfect in style, than one would suppose a pig could be bred—all of the true "Prince Albert" stock. Why they really looked innocent, and in no manner of descent from the herd which ran into the Sea of Gallilee when possessed of the devil, some eighteen hundred and odd years ago!

It is needless to talk further about the pigs, for I fell so much in love with them that I dreamed of them half the night, and nought would do but my friend would have me accept one of them to take to my own place, with which to improve my own stock, although I had thought that my own were about good enough. The matter was soon settled, and a pig I was to have, when the navigation opened, and he could be safely sent to me. In due time I received him, and although I had never looked upon a thing of the swine family with particular complacency, the quiet temper, docility, and beauty of the creature has now won all my prejudices, and my pig is one of the prime favorites among my farm stock.

Finding his stock too large for his farm, my friend, a few months afterwards, sold his imported pair, and a part of the young ones to Col. J. M. SHERWOOD, of Auburn, who now keeps them, and declares that, although he had the best of pigs before, he never saw anything to compare with them. For introducing these beautiful pigs into the country, Mr. JOHN C. JACKSON—for that is the name of the gentleman—deserves more credit for good works than half the politicians in the country put together.

Now, as the pig, or a family of pigs, are useful things on every country place, be it a farm proper or country seat, with only its garden and fruit yard, let every one who requires a creature of the kind, see that he select good ones of an *improved* race, easy kept, and quite tempered; and if he want their services in his fruit orchard, they will not then *root out his trees, or rasp off their bark*, as the common ill bred brutes of the country are sure to do if they get access to them, thus effectually destroying curculio, fruit, and tree; whereas, your quiet little "Tussers" will graze among the trees, nosing over the fruit, and "using up" the grub.

After reading this paper, I beg your readers not to suppose that I have these, or any other pigs to sell, as I have not. I write this solely *pro bono publico*, and to do justice to the good taste of my friend, Mr. JACKSON, as well as to advise all my horticultural friends to get *good* pigs when they get any. Your Suffolk pig, and your Essex pig are also quiet, gentle creatures, and well deserve all the patronage bestowed upon them; but in all my pig knowledge, I have never met with the beauty and perfection of the Middlesex pigs imported and bred by Mr. JACKSON.

LEWIS F. ALLEN.

Black Rock, July, 1852.

Domestic Notices.

CHURCH IN THE LOMBARD STYLE.—[See FRONTISPIECE.]—The great change, and no less striking improvement, which have taken place in the church architecture of our principal cities, within ten years past, are beginning to exert an influence on the rural and suburban edifices of the same character. The uncouth wooden buildings with frightful steeples, which deformed so many of our country towns, are gradually being displaced by tasteful and convenient churches of stone or brick, built in more correct proportions, and the interiors of which are really calculated to raise devotional feelings in the minds of the congregations.

The suburban churches of our country towns are very important features, not only as places of worship, but as bestowing dignity and beauty upon the towns themselves. To awaken and diffuse a taste for good country churches comes fairly within the field of our labors, and in addition to examples already given, we place before our readers this month, a handsome design by Messrs. WYATT & BRANDON, eminent architects in London, for a church in the Lombardic style of Architecture. It has been admirably carried out at Bethnal Green; the material, brick, with stone dressings. The interior dimensions are 117 feet long, 50 feet wide, and 60 feet high to the picket of the gable.

NEW HARDY CHERRIES.—We received on the 26th of June, from B. B. KIRTLAND, Esq., of Greenbush, N. Y., samples of two varieties of seedling cherries—called *Mary* and *Christiana*, that seem to us worthy of the attention of pomologists, especially at the north and west. These cherries appear, in fruit, flavor and foliage, to be a cross between the Mayduke and the Heart cherries, assimilating much more closely in flavor and color and form to the Mayduke than the other parent; the color bright lively red—the flavor sprightly sub-acid—the fruit borne in large clusters—the leaves rather narrow.

The "*Christiana*," with quite narrow, small leaves, and long stalks, is the finest flavored variety. "Mary" is the most profuse bearer and remarkably hardy. Greenbush is in a cold portion of the northern states—the thermometer having fallen to 14° below zero the past winter. The consequence of this was that the cherry crop was almost wholly cut off by the destruction of the germs of the flower buds in winter, while these two seedlings of Mr. Kirtland's were loaded with the heaviest crops. From this fact, and the close relation which these seedlings have to the May Duke, there is every reason to believe they may prove hardy enough to supply that place in the north and west, which the comparative failure of nearly all but the acid cherries has left vacant.

LARGE TREES IN THE STATE OF NEW YORK.—It is much to be regretted that no work has ever been published with well engraved portraits of the finest specimens of our noble American forest trees, many of which are annually disappearing, either by old age, or by the process of "clearing up" the country. It is saddening to the heart of a lover of trees to see in many parts of the country the finest single specimens sacrificed by the wanton axe of the woodman, who sees only so much "cord-wood" in what, to his descendants, would be valued "beyond rubies." Of course new-world *forests* must be cleared up, but it is difficult to understand what good reason the most practical common sense man can have for despoiling the neighborhood of his dwelling of stately single trees—that should be held sacred as the pride and glory of his home landscape. One cannot but feel that the sentiment of the nineteenth century in this respect is far behind that of the most remote antiquity—as the Jews were forbidden to cut down the favorite trees even of an enemy. (Deut. xx, 19.)

The Genesee Valley is that part of New-York where the lover of fine trees will find most to delight and satisfy him. On the Genesee Flats is a kind of meadow-park of a thousand or more acres, belonging to the WADSWORTH family, with the finest specimens of park-like oaks, elms, and other trees of indigenous growth—finely developed and presenting studies for the artist or arboriculturist, such as are nowhere else

to be seen in the middle or eastern states. Mr. S. B. Buckley has given, in Silliman's Journal, a record of some large trees, from which we extract the following paragraphs as worthy of preservation in the Horticulturist. (We should be glad to have accounts from our correspondents in various portions of the union, of trees of remarkable size—especially those which grow singly—and not in forests.)

"There is a 'big tree,' still alive, (July, 1851,) on the banks of the Genesee river, about a mile from the village of Geneseo. It is a swamp white oak (*Quercus bicolor.*) At the height of about 20 feet, its body sends forth numerous large branches, many of which are now dead. The trunk varies little in size from the ground to the branches, it having an average circumference of 27 feet. The smallest circumference is 24 feet. An elm tree three feet in circumference is partly joined with it, their bodies often touching, and their limbs intertwining, the green leaves of the elm, make the old oak look fresher than it really is. They are situated in a pasture, and the ground is bare and hard beneath them from the trampling of cattle and visitors.

The swamp white oaks are numerous and often attain great size on the Genesee Flats. As examples, one is 14 feet in circumference; another 13 feet 9 inches; a third 12 feet 8 inches. The wood of this species is said to be superior to that of the common white oak. Many of these majestic trees contain more solid feet of timber than the "big tree," on account of their greater height.

A large tree on the Genesee River, near Geneseo, attracted the notice of the early settlers of Western New-York. One of their finest roads, leading from Canandaigua to Geneseo, via. the foot of Honeyoye Lake, was long known as the "Big Tree Road." The native Indians had long known this corpulent giant of their woods, and named one of their chiefs "Big Tree" or Great Tree." A section of this tree was conveyed to New-York, via. the canal and Hudson River, about 15 years ago, where it was used as a grocery.

I have recently, (Feb. 1852,) visited the lumber region in Alleghany county, N. Y., where a large portion of the hills and valleys are still covered with dense forests, through which the white pines, (*Pinus strobus,*) are conspicuous for their great size and height. I measured one which was 15½ feet in circumference at the height of 4 feet. One stump was 5 feet in diameter, another 4½ feet. A saw log 4 feet in diameter, showed by its annular rings, an age of about 210 years. The largest log which I could learn of ever having been at any of the mills, was one sawed several years since, 7 feet in diameter. A plank from this log, containing 600 feet board measure, was exhibited at the county fair, at Angelica. I saw a hemlock, (*Abies canadensis,*) which was 12 feet in circumference.

In the history of New-Hampshire, by Belknap, a white pine is mentioned which was 7 feet in diameter. Michaux, in his Sylva, states that he saw a stump in Maine more than 6 feet in diameter. He also measured two trunks that were felled, one was 154 feet long, and 54 inches in diameter, the other 142 feet long, and 44 inches in diameter. I quote the above to show that no part of the United States can probably boast of larger white pines than Alleghany county, N. Y.

An elm, (*Ulmus americana,*) was cut down during the present winter, on the farm of S. K. Jones, near Dresden, Yates county, New-York, whose stump is 4 feet 10 inches in diameter at 4 feet from the ground. At the height of 15 feet, the trunk was 15½ feet in circumference. At the height of 20 feet, where the trunk was divided into two large branches, the circumference is still greater. Its height was about 60 feet. Its annular rings indicate an age of about 300 years. [We think there are still larger elms in the valley of the Connecticut. Will some of our readers there send us statistics? Ed.]

In the township of Sodus, Wayne county, N. Y., are many large Sycamores, (*Platanus occidentalis,*) several of which are from 14 to 16 feet in diameter. The largest of them are uniformly hollow. These trees are not far from Lake Ontario, and their branches still appear to be in a flourishing condition. Most of the trees named in the foregoing article grew in a rich, deep alluvial soil; even the large pines were either in ravines or valleys.

The Climate of San Francisco.—From a

valuable scientific account of the climate of San Francisco by Dr. GIBBONS, we extract the following, as giving more precise information than any usually obtained, and as calculated to explain the reason why the new evergreens from from California are not so hardy in the middle states as those from China and the Himmalayas:

"The most striking peculiarity in the climate of San Francisco, is its uniform temperature. There are no extremes of heat or cold. There was only one day in the three summer months (the 18th of August, 1851) when the thermometer rose to 79°, (at Philadelphia it reaches this point 60 to 80 days in the year.) Only once in the year did the thermometer sink to the freezing point, and it was below 40° only on twenty mornings.

In the summer months there is scarcely any change of temperature in the night. It is in early morning, sometimes clear, sometimes cloudy, and always calm. A few hours after sunrise, the clouds break away, and the sun shines full cheerfully and brightly. Towards noon, or most frequently about one o'clock, the sea breeze sets in and the weather is completely changed. From 60° to 65° the mercury drops forthwith to near 50°, long before sunset, and remains almost motionless till next morning. The sudden fluctuations of temperature incident to the climate of the Atlantic states, are unknown here. We have none of those angry outbreaks from the northwest, which change summer to winter in a few hours.

As regards the influence of the seasons on vegetation, the common order is reversed. The entire absence of rain in the summer months parches the soil and reduces it to the barrenness of a northern winter. The cold sea winds of the afternoons of the summer solstice, defy the vertical sun and call for flannels and overcoats. When the winds cease, as they do in September and October, comes a delightful Indian summer. In November or December the early rains fall, and the temperature being moderate, vegetation starts forth, and mid winter finds the earth clad in lively green and spangled with countless flowers. The spring opens with genial warmth, but just as the April sun begins to give promise of summer heat, its rays are shorn of their power by the winds and mists of the Pacific.

These remarks apply to only a small part of the state of California. Beyond the influence of the bay of San Francisco and its outlet, the sea winds are scarcely perceptible even near the ocean."

STRAWBERRY BEDS.—Sir: I followed your directions last year in making strawberry beds, and with such extraordinary success, that I am induced to recur to the subject for the benefit of those who like myself would "take pains to excel as good cultivators" if they knew how. I began by collecting a dozen loads of good stable manure, rejecting all the litter. I then marked out the ground to be devoted to strawberries, and commencing on one side opened a trench three feet wide, by wheeling all the top soil, for six inches deep, to the opposite side of the intended strawberry plat.

I then spread a coat of the stable manure 4 inches thick, over the lower layer of soil, laid bare in the trench, and turned it under, mixing it well with this soil. Then I threw the top soil of the next space of three feet upon the bottom soil in the trench already manured. This left a new space or trench 3 feet wide, which was manured and trenched like the other, and this was repeated till the whole plat was worked over. I then dug over and levelled the top soil again, mixing some decomposed manure with the surface of the beds on making them. Through these beds I set two rows of plants, the rows 14 inches apart—the plants 10 inches apart in the rows. I removed the plants early in August—young runners with little balls of earth attached. I directly covered the beds with tan-bark, 2 inches deep. This kept the plants cool and moist, so that they struck root immediately, and made such extraordinarily fine plants, that I have had a fine crop this season, many of the berries measuring 3 to 4 inches. I planted 8 sorts, and after trial prefer the following. Burr's New Pine, Hovey's Seedling, Swainstone Seedling, Early Scarlet. Yours, A PHILADELPHIA SUBSCRIBER. *July* 14, '52.

SOAP SUDS AND POULTRY MANURE FOR GRAPES.—A "Horticulturist on a very small scale, having only 4 pear trees and six grapevines," (dating at Pittsburgh,) writes us an account of his mode of feeding a large Catawba grapevine, which may interest some of our suburban readers. He forms a large basin around

the roots of his grapevine, early in the spring, by raising a curb or box of boards, so that the soil over the roots will take a couple of barrels of water without allowing it to run to waste. He provides himself with a quantity of the sweepings or manure of the poultry yard, keeping it constantly diluted or dissolved in a barrel, at the rate of a peck to a barrel of water. Every week, at the close of the "washing day," he first empties upon the roots of the vine a pailful of the manure water from the barrel, and afterwards as much of the "suds" as the vine will take up. The consequence, as may be expected, is a great luxuriance of vine, and enormous clusters of fruit. A very large backbuilding is covered by this vine, and the fruit is just twice as large, in bunch and berry, as those on the other vine, left to ordinary good garden soil. A neighbor, who had an old Isabella vine that had failed for several years to bear any good fruit, has taken the hint, and applied the "weekly wash," with the fertilizer as aforesaid, and has been gratified with a larger and more promising crop this year, than the vine ever bore previously.

A WELL DESERVED TRIBUTE.—The New-York State Agricultural Society has, by its steady devotion to the interest of the farmer, by the solid sense and intelligence of its officers, by its liberal premiums and its great annual fairs, become one of the most useful, honorable, and influential institutions of the country.

Its premiums now amount to over six thousand dollars per annum, and its *Transactions*, published every winter, contain a great amount of valuable experience and observation. Few of those even who share in the reputation and are benefitted by the results of such a society, know how much of the labor is done by a few earnest, devoted men, who, though not the conspicuous dials of the time keeper, are the concealed balance wheels or regulations so much more necessary to the accuracy and perfection of the machine. The Treasurer and former Secretary of the Society, Mr. TUCKER, pre-eminently belongs to this class, and we notice with no ordinary pleasure that by the following resolutions of the society, passed some time since, the executive board have determined to present him with a handsome service of plate, as an acknowledgement of their estimation of his worth.

WHEREAS it is the opinion of this board, that the New-York State Agricultural Society is greatly indebted to Mr. LUTHER TUCKER for his able, efficient and long continued labors, as a member of the Executive Committee, having acted as its secretary and business officer for the first three years after its reorganization, in 1841, and aided most efficiently in perfecting its organization, and in carrying into successful operation its first Fairs, at Syracuse, Albany and Rochester, furnishing an office for the Executive Committee, the necessary stationery, &c. for the three years; preparing for the Press, and superintending the printing and distribution of its Transactions, and in performing all the duties devolving upon its local Secretary, for all of which, as well as the expense incurred by him in the performance of these services, he declined to receive any reward: and,

Whereas Mr. TUCKER has, with the exception of the year 1844, when he declined to act as Secretary, on the ground that the Society was then quite able to pay for such services, and the year 1847, when he again declined the secretaryship, to which he had been elected, served the Society, as a member of this Board, or as its Secretary or Treasurer, from its reorganization to the present time, without remuneration, except for the year 1845, when he was allowed $300, an amount less by $250 than was paid for the same services the previous year: therefore,

Resolved, as the unanimous opinion of this Board, that to no man more than to Mr. TUCKER is the Society indebted for its present highly prosperous condition, and that the thanks of the Executive Committee, together with a service of plate to the value of $500, be presented to him, as a testimonial of their high appreciation of his services and character.

THE COLD WINTER IN ARKANSAS.— A. J. DOWNING, Esq—Dear Sir: As you expressed in the Horticulturist a wish to hear from different parts of the country, respecting the effect of the last extraordinary winter on trees and plants, I will endeavor to tell you how things stand in this neighborhood, although it is doleful enough. The latter part of the summer of 1851, as well as the autumn and forepart of winter, was unusually dry, and the trees making no late growth, the wood was perfectly matured. The first cold weather was on the 15th of December, the thermometer standing at 4. On the 18th it was at zero. January 13th, 2 below zero; 19th, 28 below zero; 22d, 16 below zero, all at sunrise, when the thermometer was at its lowest. 28th, at noon, it was 70, and Blue birds singing; 30th, at sunrise, 60. Here was a difference of temperature of 98 degrees, in the short space of nine days; no wonder it proved so dis-

astrous. Through the month of February, and the first half of March, the weather was very pleasant, so that vegetation was far advanced, and the pear tree nearly in bloom, but on the 18th the thermometer fell to 16, and since then it has continued cold and disagreeable, until the last days in April.

In summing up the injury that has been done, I allude to my own garden and neighborhood, generally, for there are few places where the situation is a favorable one, that they have not suffered quite so much. My peach trees are nearly all killed; and part of the one year old pear trees in the nursery, with some of those two and three year old, that were planted out. *Magnolia grandiflora*,* *M. purpurea*, and *M. tripetela*, are frozen to the ground. *Magnolia macrophylla* is injured only on a few shoots of last years growth. My beautiful Pyrus Japonica hedge had not one early flower, and some of its twiggs are frozen. Chinese Honeysuckle, *Deutzia scabra*, and the hardy roses, with one single exception, are killed to the ground. The Chinese Arborvitæ is entirely destroyed.

The Trumpet Honeysuckle, the White Italian Honeysuckle, the Purple, White, and Persian Lilac, the Snowball, the Fringe Tree, and Venitian Sumac, are the only things that escaped.

Of Apples, I think we shall have a tolerable good crop, only a few of those that were most advanced were injured by the late frosts. Pears we shall have but few; and Plums none at all; the Curculio destroys them all, and so I cut down the trees.

A few words about the Osage Orange. In the fourth vol., page 146, of the Horticulturist, your correspondent, J., says the seed all rotted in the ground, and then asks, "Was the seed worthless, or was it immersed too long, or was the water too hot?" On the 5th of April, 1848, I planted a quart of Osage Orange seed that had been soaked for 40 hours in warm water, and afterwards spread on a board for 32 hours. When I received the seed the ground was not prepared, and by the time I was ready to plant, it rained, and continued to rain for several days; at last, in a fit of desperation, I made drills in the mud with my fingers, (it was impossible to use the drilling machine;) threw in the seed, and covered it slightly. Never was seed put in in worse condition, nor did any ever grow better; indeed, I thought every seed came up. The water poured over the seeds was not quite so hot as that used by your correspondent. I imagine the seed was worthless when he got it.

In conclusion, let me tell you, Mr. Editor, that I have received much of benefit and pleasure from the perusal of your volumes. Should you find anything in this, my first attempt, likely to interest your readers, you are at liberty to use it. I am sir, respectfully yours, J. M. J. Smith. *Fayetteville. Arkansas, May* 4, 1852.

* Magnolia grandiflora has stood the winter perfectly at Washington. M. tripetela is perfectly uninjured, and now in full bloom in our grounds on the Hudson. Ed.]

Cold that Destroys Peach Buds.—I have of late been perusing the horticulturist, which to me is very interesting. Among other things that particularly attracted my attention, was a notice of fruit buds being destroyed by the extreme cold weather of the past winter. It has frequently been asserted that 12 degrees below zero destroys peaches and some other fine fruit. As I have had some experience in fruit raising for twenty years past, I have had an opportunity of making some observations to my own satisfaction, and as you have requested notice from different parts of the country, respecting the prospect of fruit, I send you some facts from this section. Although I have to refer to other persons to determine the state of the weather, still I have reason to believe the statements correct. The thermometer records a number of days the past winter, ranging from 14 to 26 degrees below zero. Now does that degree of cold kill the fruit? Nature answers the question. The spring with us is quite backward, but it gives us full evidence that there shall be no failure in the promise of regular seed time and harvest. Though the elements may yet prove destructive, the prospect is promising. Peaches, plums, and cherries, are now coming out, clothed with their pink and white, even to the covering of their branches. Does this look like their being frozen to death—other proofs we have, last year 1850 and 51, the cold ranged from 13 to 27 below zero and there has not been so large a crop of peaches for eight years; plums were mostly destroyed by the curculio, cherries quite plenty. I have some 125

peach trees, set last season, one year from the bud, quite a share of them are now filled with blossoms; and plums, from six to eight feet high, are clothed in bloom. I have some dwarf pears standing from two and a half to three feet high, set for a dozen fruit each—so much for our prospects in this cold region.

I raise all my fruit trees, perhaps I may at some leisure moment send you my manner of cultivation. CHARLES SMITH. *Shelburne, Franklin co., Mass., May* 24, 1852.

[The irregular effects of the winter are very difficult to understand. It has been supposed that 12° below zero invariably killed the blossom buds—but there are many examples the past winter of their surviving a greater cold uninjured—while in some portions of the country they were quite destroyed with less cold. Probably more depends on the *thawing* after the severe frost than on the cold itself. ED.]

COUNTRY SEATS ABOUT BOSTON.—SIR: My attention has been called to an article in the April number of your Journal, signed "Horticola," and to a commentary on the same in the May No., by a "Subscriber," between whom there seems to be some little difference of opinion about the relative beauties of various country seats in this town, (Waltham, Mass.)

This is a nice question, as all mere matters of taste are; but can be settled, perhaps, by a little reflection. The truth is, we are, here, a little fastidious in these matters. The beauties of country residences arise from position as well as surrounding scenery; and we are so completely encircled with positions so beautiful by nature, and requiring so little artificial adornment, that we are not aware how capricious we have become in our taste, and judgment too, in those matters. In the early settlement of this state, when our ancestors, with the whole land before them, were looking only for pleasant places on which to take up their rest, tradition says that when they reached Watertown, of which Waltham was then a part, they ceased their search, satisfied that their new world could not reveal to them, beyond, a fairer inheritance. Standing on these hills, from which they could see, on the one side, the sun rising from the dreary ocean which they had passed in fear, and setting on the other side, in, to their minds, the still drearier wilderness, they planted themselves "*with much joy*," in this lovely region. I say, then, we are not judges of fine positions; we have no waste places for contrast; we see nothing but nature, and so arrayed as to appear, "even when unadorned adorned the most." But to go back to the true question before us.

"HORTICOLA," a stranger, I hear, but enamored of our town, (a proof of his good taste,) speaks rather slightingly of the ancient seat of the LYMAN'S in this place; the oldest I believe, and heretofore considered the grandest; and passes by its old rival, the Gore Place, with mere mention; this *does not* suit "A SUBSCRIBER," nor would it any old conservative. The *lands* of MR. LYMAN are broad and rich, but low. It is a valley residence, and of course does not appear to the same advantage an estate chosen more for prospect would; such was not the fancy of that day. Gore House, of about the same period, is in similar taste. In that day, houses were built for merely comfortable residences—now for show country seats, and prospects are now much more valued. HORTICOLA speaks flatteringly of Rose Hill, where the appliances of a more modern taste are fast revealing the beauties of a position entirely differently situated. This accounts for HORTICOLA'S opinion, and "A SUBSCRIBER'S" too: they are both right. But my intention in this note is to speak a word for a part of our town, which has till this present time, been obliged to be content with but silent praise. Would "SUBSCRIBER," if he be, as his deep interest and feeling in the case, strongly encourages one to think—an inhabitant of this lovely land, but turn his eye upon "Trapilo," our romantic hills and fertile vales in the north and east; could he abstract himself from the dusty "plain," and repose himself awhile among those quiet scenes, and select some favored spot for experiment, my conviction is, that with sufficient means, he could distance all competitors in a beautiful country seat. But I find my communication is becoming too long, and I must omit much I intended to say about some other places in this town; but I hope "HORTICOLA" will communicate again with you, for he evidently has an eye to beauty in landscape gardening. TRAPILO. *Waltham, Mass., May* 31, 1852.

SULPHATE OF AMMONIA.—I was very much pleased with the recommendation of *Sulphate*

of Ammonia as a fertilizer. by "An Amateur," in your Magazine for June." The one pregnant assurance, "nothing so good can be cheaper, and the substance may be obtained at almost any apothecary's," wrought in me a lively satisfaction—endorsed as it was, by your own professional endorsement. Filled with faith, I straightway sought a drug store, in search of the requisite "Sulphate of Ammonia," and experienced something very like contempt for the establishment, on learning that no such substance contributed to make up its assortment. But after having visited four other large stores with like success, and finding the said "sulphate" at neither, while its very existence seemed doubted at many, I sobered down into a more accustomed sobriety, and contented myself with a small dose of the *Muriate* for experiment.

Now, what is the trouble? If no *Sulphate of Ammonia* can be found at the respectably extensive drug stores of Syracuse, am I not warranted in doubting the general ability of horticulturists to easily procure it? Or does "An Amateur" expect us to manufacture for ourselves, as we can do if necessary, from salts which apothecary's *do* keep? or is it something else than the *sulphate* which he uses? For one, I am really anxious for the means of preparing so valuable a fertilizer. J. M. W. *Syracuse, June* 6, 1852.

[Our correspondent's only error was in saying the *sulphate* was easily procured. We believe it is only to be had of the wholesale druggists in the larger cities. *Muriate* of ammonia, (sal ammoniac,) may be had at any druggists, and from some experiments we have made lately, we believe it is a very tolerable substitute for the sulphate, used in the same proportions. Ed.]

Insects on Apple Trees.—A. J. Downing. On my property near this city, I have a small young orchard of apple and peach trees, which early in the spring, gave promise of a fine crop of fruit. The trees are very thrifty, and are just beginning to bear. The apple trees, especially, look well, and every one had some fruit, and some of them were loaded. But an insect of the bug or beetle species has attacked my orchard, and I fear they will totally destroy the fruit, and seriously injure my trees.

About a week since was the first I observed of them. I then discovered a few of them on different trees, eating the tender leaves and young apples. In the past week they have multiplied by thousands, and have commenced on my peach trees, and even the vegetables in the garden. They have eaten up many of the leaves entirely, except the stem, and nearly all the apples. They commence by making a small incision in one side of the apple or peach, then eat the pulp, and increase in numbers as the opening enlarges, until the fruit is entirely devoured. I have seen as many as 15 and 20 all crowding their heads into this opening, in the side of a small apple. The peaches suffer in the same way, but they like the apples much better.

When I discoved these insects, my first step was to consult my "books," see what they were, and what was the best method of destroying them. I have the works of Downing, Barry and Thomas, all recent publications, and specially devoted to fruit trees, besides several other works that treat partly on the same subject, but in none of them could I find a description which would answer, as I thought, to this insect. I am a mere novice in the delightful study and art of fruit-growing, as yet, and could not tell any of the destructive insects except by comparing them with the descriptions in the books—which, by the way, I find entirely too brief and unsatisfactory for a learner like myself. (*Query*—What is the best work on this subject of "Insects") [Harris' Treatise—now out of print—but a new edition of which is in preparation. Ed.]

This insect appears to resemble the *locust* more in its habits and ravages, than any other insect of which the books treat. But it is not near so large as the locust, and carries on its work of destruction in perfect silence, They fly about but little, and chiefly in the warmest part of the day. They continue pretty much in the same place, on the leaf or apple, during day and night. In the evenings and mornings they are more stiff and torpid. This induced me to try an experiment of catching them in a sheet early in the morning, when the dew is on the trees, and then killing them. We tried this plan, but after slaying our ten thousands, we gave it up as a hopeless job. I then tried syringing the trees most effectually with strong tobacco juice—but this seemed to have but lit-

tle, if any effect, upon them. This would never kill them, for I found they would live after being immersed five minutes in the juice. Even very strong brandy would not kill them for several minutes.

I herewith send you some eight or ten of these insects, a part of what I took from one apple, that you may see them, and give me any further information you may possess as to their nature, habits, &c., and the best mode of destroying them. If they are unknown to you, perhaps a brief notice in the "Horticulturist" would elicit the desired information, or attract direct attention to the insect, if it should be found in other sections of the country. I believe it prevails to a greater or less extent in all the orchards in my neighborhood—how much further I have not learned. It is my intention to watch the insect closely, and learn more of its nature and habits.

The insects I send you were killed by being immersed in strong brandy. I will put them up in cotton, so that they may carry safely in my letter.

My ground is on the bank of the Ohio river, commonly called "bottom land,"—and is a deep, rich, sandy loam; but the trees on the river hill were also attacked.

Any information on this subject you can give me in a private letter, or in the Horticulturist, will be thankfully received. Yours, &c. J. N. F. W. *Pittsburgh, Pa., June* 19.

The insect sent us with the above is the rose-bug or rose-chafer, well known in some parts of the middle states, where the soil is light and sandy. It is the most difficult insect to destroy where it appears in abundance. In some vineyards on the lower part of the Hudson, infected with it, the only successful remedy yet found is to pick them by hand, and put them in boiling water—an obviously hopeless task, when so abundant on trees as described by our correspondent. If any of our readers have found a more easy and speedy death for them, we shall be glad to hear from them. Ed.

Roses—Birds and Insects.—I am *very* much obliged to you for the information you gave me last autumn, as to the winter disposition of my roses; it kept them as nicely as possible, and this summer they have made me quite famous, and people sometimes come from quite a distance to see them. But what *shall* I do to my Chromatella? It grows and branches out until it looks like — a centipede; it isn't a pretty comparison I know, and if my rose would behave itself properly, I should not think of it, much less speak of it. In the first place it is sixteen feet high, and every two or three inches along the whole length, there is a branch from two to three feet long; and it *will* not blossom—and when it does blossom it is not what it should be. Two years ago it was yellow—a true Chromatella, as I suppose; last year it would not spend time to blossom; this spring it had eight blossoms, but they were white, with pink edges and just a faint shade of yellow in the centre. Is there no way to bring them back to their original color? Is this change in consequence of being near other roses? The great thing has nearly killed my poor little white moss rose, by fairly starving it out.

I do not like your correspondent J. C. H. (I have just read his article on "birds, insects, and other matters" in the July number.) I am very angry with him. I think that if I had an opportunity I should feel strangely tempted to pull his hair! Probably if he knew it, his answer would be something like that of Napoleon's ambassador to the old lady: "Madam, the Emperor would be very sorry to learn that you have so poor an opinion of him." Or something like it. But I am angry nevertheless. "Boy do not shoot birds," do they? Then I am laboring under a delusion in thinking that my own pet robins, and blue-birds too, became food for—fishes, once upon a time! There are a few boys in these United States, who do not live in the city, and who are not such very poor marksmen either, as *I* know to my cost. But I find that writing about it is by no means a soothing process, so I will stop, lest I say something to be sorry for, or ashamed of.

But do tell me what to do for my rose, Mr. Downing, for I very much fear it is a hopeless case. Very respectfully yours, A Subscriber at the West. *July* 15, 1852.

Our "Subscriber at the West" must not lose her patience with her Chromatella rose, and she will have abundant reason to be satisfied with it next season. At present—as is always the case with this rose, when it has fair play, it is vindicating its nature as a *climber*,

and expending all its energies in growing. Let it grow, and the larger it gets the more superb will be its bloom, when it comes into a flowering condition again—which it will doubtless do next season. We seen it, farther south, covering a trellis 60 feet long, loaded with flowers at the end of every branch. There, it stands the winter without care, but in Illinois our correspondent will have to bend it down and cover it so as to protect it from frost and wet in winter. All that need be done with it this season, is to let it grow till the middle of October as freely as it likes. Then commence *pinching* off the end of every shoot, and repeat this if it starts again. This will force the young wood to *ripen* well before winter, and next season the plant will doubtless bloom very profusely.

We quite agree with our "Subscriber at the West" in differing from J. C. H. in his opinion regarding the worthlessness of birds as insect destroyers. If J. C. H. will examine the works of any of the entomologists who have taken pains carefully to study the habits of insects, he will find them continually referring to the agency of birds in destroying or preventing the excessive increase of various sorts of insects. We ask, as a specimen, his attention to the following paragraph, which we quote from Harris' Insects, p. 26. "A cautious observer, having found a nest of five young jays, remarked, that each of these birds while yet very young, consumed at least fifteen of these full sized grubs (cockchafers) in a day, and of course would require many more of a smaller size. Say that, on an average of sizes they consumed twenty a piece, these for the five, make one hundred. Each of the parents consume say fifty, so that the pair and family consume two hundred every day.

But as the grub continues in that state four seasons, this single pair, with their family alone, without recognizing their descendants after the first year, would destroy 80,000 grubs. Let us suppose that the half, namely, 40,000 are females, and it is well known that they lay about 200 eggs each; it will appear, that no less than *eight millions* have been destroyed, or prevented from being hatched by the labors of a single family of jays. It is by reasoning in this way, that we learn to know of what importance it is to attend to the economy of nature, and to be cautious how we derange it by our short-sighted and futile operations." Ed.

Notes from Illinois.—Sir: It is rather late in the season to inform you of the effects of the last winter, but as I do not observe any mention made of it by correspondents from Illinois, I will give you a few items—although September was a very hot and dry month, yet the winter came on so gradually that fruit trees and fruit would not have suffered but for the great severity of the freezing—the murcury in F. at several times went to 14° below zero, but especially on the 19th January when it reached 22° below zero. Of course we could not hope that the buds of the peach could resist such extremes, but we hoped that the seasonable weather in the beginning of winter had prepared the tender shoots to resist it—but it proved too much for them, and great numbers of young trees have wholly perished, while all have suffered greatly—from one inch to three feet of the extremities of the limbs having been killed. Strawberry plants that were not protected also suffered—particularly Hovey's Seedling—a strawberry that I received as Keen's Seedling, but which I think must be the Early Scarlet, has stood the winter well, and is the only one that has set any fruit—but much of that was killed by a frost on the 20th May. Rather a hard climate this for gardening and fruit culture—ten days ago to-day every tender plant that was not well protected, was destroyed or injured by frost—the mercury being down to 32° on the morning of the 20th, and to-day the direct rays of the sun have scorched and curled beans and the tender foliage of the pea—at three P. M., the mercury stood at 96 in the shade, free from reflection. But all I wish to trouble you, after this long story about the difficulties of our climate, is to ask you or your correspondents for some remedy against an enemy to the strawberry, which is new to us here. It is a worm about an inch long when grown, dark colored with but few bristles, very active in its movements when disturbed, that rolls itself in the leaf by a web and then preys upon everything within reach giving a scorched and blighted appearance to a whole bed that previously was most luxuriant—it is so wound up in the leaf that no general application of dry liquid will reach it—tobacco juice will destroy it when im-

mersed in a pretty strong preparation of it—but it must first be taken from its secure hiding place in the leaf, but this process would be too much like the Frenchman's flea powder for practical application—it commenced its depredations about the time the bloom began to come out and continues yet.

I think it is the same worm that attaches itself singly to the foliage of fruit trees, and is so destructive to it. Some of your correspondents anticipated a very general destruction of insects from the severity of the past winter. It is commendable to see good in every occurrence, however unfavorable in appearance, but I fear that the stock of destructive insects has not been materially diminished here, for they seem unusually ravenous for every tender sprout, after their long torpid slate.

The Osage orange in this region, stood the excessive cold most satisfactorily—even seedlings being but slightly injured It is fast growing in favor here, and will be *the* fence of this country in a few years, unless some unlooked for defect appears. There will be a few hedges turned out next spring, five years from the seed. Respectfully yours, &c. J. B. M. *Warsaw, Ill., May* 29, 1852.

Southern Fruit Culture.—Dear Sir: As we do not profess infallibility, will you allow me to qualify what I stated in the last Horticulturist in regard to the American Summer Pearmain. This apple I have noticed two or three years on young trees, and it has usually cracked a good deal, so much so, that its quality and bearing properties did not seem to me to warrant its culture with this objection.

This year, however, it ripened in the gardens of two of my friends so finely, that they called my attention to it particularly. With Dr. Camak the tree has borne this year an abundant crop of large *fair fruit* of the best quality. It ripened about the first of this month. Dr. Wood has it also under the name of "Watkin's Early," and equally fine. Whether the fine season, or maturity of the trees, has made the specimens that come to my notice so much better, this much is certain, that should its good qualities continue permanently, no better summer fruit could be desired. A friend from a neighboring county, states also that with him it is an excellent fruit and a good bearer.

The Gravenstein is now just ripening an abundant crop and though rather acid here is still a good fruit and worthy of cultivation.

Our experience in regard to peach trees, in the the main, coincides with that of Mr. Scott. In ordinary years they bear abundantly but there is no doubt that they are more liable to *spring* frosts. This year for instance, I venture to say that I will get as much fruit from a dozen seedlings in my garden, as will be gathered from any hundred northern peach trees in this town. But they generally *bear well*. Mr. Harwell (he will pardon me for using his name,) writes me in a letter of last month, that his northern peaches are getting acclimated at last, and doing well. From the early Tillotson he gathered. June 5th, a single half bushel, which he sold in Mobile for $10.50.

Our Ohio friends cannot believe the tales from this quarter of the Union, about ever-bearing strawberries. But there is very little doubt that in this climate, if well watered, the strawberry will bear nearly all the season. Since the 2d of April there has not been a week that my vines have not shown ripe fruit; not much, it is true, for they have had no care, but most after wet weather, and there is not the shadow of doubt, from the testimony of reliable eye witnesses, that Mr. Peabody's statements are entirely correct. With me Burr's New Pine and Large Early Scarlet are the only ever-bearing varieties, Hovey's Seedling is not. Yours very respectfully, Wm. N. White. *Athens, Geo. July* 9, 1852.

Reply to Dr. Valk's Strictures.—Dear Sir: As the permanent improvement of the native grapes by hybridization with the exotics, is a matter of much national importance, you will perhaps, excuse me for requesting again a corner in your valuable Journal, in answer to the caustic remarks of Dr. Valk.

As I am apt, upon honest conviction, to speak somewhat abruptly, I committed the same error by saying, "he has gone the wrong way to work." That some polite effusion of language might have been used to express the same meaning, without giving offence, I admit, and hope he will excuse the expression; but it is not by indulging in invective and braggadocia, nor yet by applying sarcastic pique against

a trifing misplaced etiquette, that science and observation are to be put down.

As the matter at present stands, in this instance, your correspondent has proved little more in his favor than positive assertion founded upon presumptive evidence,—and his assumed position is a wrong inference, for he is surely aware that the desideratum is not so much the hardiness, as to standing the severe frosts of winter, but a constitutional power to resist mildew during the growing season: and though the former is a very desirable point, yet it is a trifling matter compared with the latter. We know that in many situations far north of this neighborhood, the foreign grapevine will stand unprotected without injury; and if they did not do so, we might cover them with earth, as is done with the Fig and the vine in the vineyards in the steppes of Russia. I sincerely hope that he has gained all that he asserts, but under the circumstances it yet remains to be proved, whether or no he has got a *true cross*, for it may yet turn out to be nothing more than an inferior variety direct from the Hamburgh, as I know that seedlings from that variety often answer the description of your correspondent; and those "who know" will look with skepticism, at least, upon the experiment, until it has been grown in different localities, and under various circumstances. And I repeat that he would have made surer work of it, as regards constitution, and most likely fruit, also, if the Isabella had been crossed with the Hamburgh. Although "practical experience" may sometimes prove my argument to be incorrect, Dr. VALK has not yet shown it to be so—and if he will give it a fair and unprejudiced further investigation, and as fairly submit his experience thereon to public decision, I will willingly abide by the verdict. If, acting in accordance with the inscrutable and immutable laws of the all-wise designer of the universe, is, in his estimation, catering *a'la Barnum*, he is welcome to the delusion. What I stated is founded upon the results of many experiments upon different tribes of plants; it is a demonstrated fact, and is supported by the authority of the most scientific investigators of nature.

I do not wish to be a disputant, nor to detract from the honor due to your correspondent, and I hope that he will receive these comments with as good feeling as they are penned. My desire was to throw a mite into the treasury of useful knowledge, for the benefit of others, and if it should hereafter realize my wishes, I care not for his severe, but futile remarks. I am yours most respectfully. WM. CHORLTON. *New-Brighton, Staten-Island, July 15, 1852.*

PRUNING IN AUTUMN.—The late S. W. Cole, who strongly recommended autumnal pruning for fruit trees, says, "Thirty-two years ago, in September, we cut a very large branch from an apple tree, on account of an injury by a gale. The tree was old, and it has never healed over, but it is now sound, and almost as hard as horn, and the tree perfectly hard around it. A few years before and after, large limbs were cut from the same tree in spring; and where they were cut off the tree has rotted, so that a quart measure may be put in the cavity."—*Alb. Cultivator.*

DWARF APPLES.—The Genesee Farmer states, that a dwarf apple tree, seven years planted, and ten years old, the tree not over three feet high, growing on the grounds of Aaron Erickson of Rochester, produced a Fall Pippin *sixteen inches* in circumference and weighing *twenty-six ounces*. Two or three others were nearly as large. Apples grow rather larger on dwarfs than on standards. There is one interesting question in connexion with this subject, that we would like to have answered, viz: At what price could such apples, thus grown on dwarfs, be afforded per bushel, as a general average for seasons and cultivation and the cost of a crop per acre,—and the comparative value with other apples in market.—*Albany Cultivator.*

Notices of Societies.

Albany and Rensselaer Hort. Society.

The first exhibition for 1852, took place at the N. Y. State Agricultural Society Rooms on the 22d June; the floral display, both in beauty and variety, eclipsed that of any former exhibition; and taking into consideration the unusual drouth, the display of fruits and vegetables exceeded all anticipations.

The Society met at 12 M., Dr. Herman Wendell, its President, in the chair, when the following gentlemen were chosen delegates to represent it in the American Pomological Congress, which is to convene in Philadelphia on the 13th of September next, viz: V. P. Douw, Herman Wendell, M. D., James Wilson, B. B. Kirtland, D. T. Vail, B. P. Johnson, Luther Tucker, and E. Dorr.

The following gentlemen to represent it at the Autumnal Exhibition of the Massachusetts Horticultural Society: viz—Joel Rathbone, S. E. Warren, C. P. Williams, Jefferson Mayell, Wm. Newcomb, Wm. A. Wharton, and Amos Briggs.

And the following to represent it at the Autumnal Exhibition of the Pennsylvania Horticultural Society, viz: E. P. Prentice, E. Corning, Jr., Wm. Janes, J. S. Goold, L. Menand, Dr. John Wilson, and W. A. McCulloch.

There was a very fine exhibition of Strawberries, Mr. Rathbone, of Kenwood, exhibiting seven, James Wilson four, B. B. Kirtland ten, C. P. Williams six, and J. S. Goold sixteen varieties. The premium for the finest flavored variety was awarded to Burr's New Pine.

Of Greenhouse plants, flowers, and boquets, there was a very fine exhibition.

On the vegetable table were well grown specimens of cauliflowers, cucumbers, lettuce, peas, rheubarb, &c.

The second exhibition for 1852, took place at the Hall of the Agricultural Society, on Tuesday, the 6th July. The display of fruit, as will be seen by the report of the committee, was unexpectedly large and varied, as was also the show of plants and flowers, as well as vegetables.

The Society met at 12, M. Dr. Herman Wendell, its President, in the Chair. A communication was read from the New-York Horticultural Society, inviting co-operation with them in promoting Horticultural progress, which was ordered on file, and the following gentlemen chosen delegates to represent the Albany and Rensselaer Horticultural Society at the Annual Exhibition of said Society, which is to take place in September next, viz: Joel Rathbone, V. P. Douw, Herman Wendell, .D T. Vail, E. P. Prentice, B. B. Kirtland, S. E. Warren, B. P. Johnson, L. Tucker, James Wilson, E. Corning, Jr., Jefferson Mayell, L. Menand, E. Dorr, and C. P. Williams.

The show of Fruits was very fine, and premiums were awarded as follows:

Cherries.—For the best and most extensive collection, B. B. Kirtland, $3. For the second best and second most extensive collection, Jefferson Mayell, $2. For the best three varieties, to E. E. Platt, for Graffion or Yellow Spanish, Black Tartarian and Mayduke, $1. For the best one variety, to B. B. Kirtland, for Elton, $1.

Currants.—For the best and most extensive collection, to James Wilson, $3. For the best and finest flavored variety, to Col Rathbone, for Knight's Sweet Red, $2. For the second best, and second finest flavored variety, to Jefferson Mayell, for very fine specimens of White Dutch, $1.

Gooseberries.—For the best and most extensive collection, to Joel Rathbone, Esq., $3. For the second best and second most extensive collection, to V. P. Douw, $2. As the gooseberries were unripe, the premiums for best flavored and best variety, could not be awarded.

Raspberries.—For the best and most extensive collection, to Col. Rathbone, for five varieties, $3. For the best and finest flavored variety, to Jefferson Mayell, for Franconias, $2. For the second best, and second finest flavored variety, to V. P. Douw, for Red Antwerp, $1.

The display of greenhouse plants, flowers, &c, attracted much attention, and was considered fully equal to any previous exhibition.

Of vegetables there was a handsome exhibition, consisting of cucumbers, beets, onions, carrots, string beans, squashes, &c.,

Pennsylvania Horticultural Society.

The stated meeting of this association was held in the Chinese Saloon, Philadelphia, on Tuesday evening, July 20, 1852. Gen. Patterson, President, in the chair. The exhibition was unusually fine in each department. The displays of plants remarkably so, and consisted of five extensive collections all in full flower. The President's gardener contributed a very large table of finely grown specimens—Hydrangeas, Yucca, Gloxinias, Gardenias, fine varieties of Fuchsias, etc. James Dundas' gardener, beautiful specimens of Stigmaphyllum ciliare, Stanhopea grandiflora, one of the finest air plants, Cattleya crispa, Torenias, Gloxinias, Fuchsias, and Hydrangens. Harry Ingersoll's gardener, a choice collection of Gloxinias and Achimenes, which reflected credit upon his skill. Caleb Cope's gardener, brought twenty-six select plants, among which were Achimenes gloxiniæflora, A. Liebmanii, Adamia versicolor, Fuchsia—Fair Rosamond and Don Giovani and double purple Chinese Primrose, all new and shown for the first time. John Lambert's gardener had a handsome collection. Roberts Buist's foreman, a fine specimen of Zauchsneria californica, the first shown before the Society, Thos. F. Croft exhibited a collection of very fine Pinks and double Poppies. The Bouquets and designs of cut flowers displayed taste and judgment. The design by Isaac Collins, gardener to Gen. Patterson, was large and beautiful, the flowers which composed it were of the choicest varieties. Thos. Meehan, gardener to Caleb Cope, presented another of those large baskets the center of which displayed the 77th flower of the Victoria regia from the same plant, it was a beautiful specimen; also a pretty design of exotic flowers and a basket formed with native flowers. Robert Kilvington exhibited a large cone bouquet of native flowers and hand bouquets, and Thos. Meghran a basket of cut flowers.

The fruit table temptingly presented its delicious burthen comprising fine specimens of Black Hamburgh Grapes from Robert Egee's houses. Peaches, the Noblesse, Crawford's early Melocoton, George 4th and rareripe varieties; Nectarines—the Pitmaston and Elruge varieties; Plums—the Green Gage and Purple Gage from Caleb Cope's. The Musch and Baxter Seedling Apricot, Wilder Raspberry, Giffard and Muscat Pear, large yellow and large Green Gooseberries from Isaac B. Baxter. The The Moorpark Apricot from James Dundas. Five varieties of Cherries and one of Plums from Mrs. J. B. Smith's. Madelein Pears from H. W. S. Cleveland. Miser Plum by A. Parker. Cherries and Red Currants, by N. A. Roe; Blush Apples and Red Currants, by M. Snyder. Several varieties of Apples, choice kinds, and Peaches by John Perkins. White Currants from Miss Gratz's; Black Currants from J. Lambert's. The collection of vegetables were really very fine and extensive, and from the following sources: Anthony Felten Jr., Thomas Meghran, gardener to R. Cornelius, John Miller, gardener to Joseph S. Lovering, Maurice Finn. gardener to John Lambert; Thomas Meehan, gardener to C. Cope and James Jones gardener at Girard College. THOS. P. JAMES, Recording Secretary.

State Pomological Convention at Columbus, O., *August* 31, 1852.

Agreeably to a resolution adopted by the last Ohio State Pomological Convention, held at Columbus, Dec., 1849, it is the duty of the undersigned to make the call for the next session.

Therefore, in pursuance of such duty, and after corresponding with gentlemen in various parts of the state, we hereby request all persons interested in the subject of Fruit Culture, to assemble in Convention at Columbus, on the 31st day of August, 1852.

It is desired that fruit growers not only will bring specimens of fruits ripe at that time, for exhibition and comparison, but that they will also bring with them notes and observations relative to varieties ripening at other seasons.

Fruits intended for exhibition, or communications therefor, from those who cannot attend in person, may be directed to the care of M. B. Bateham, Columbus.

A. H. ERNST, President.

J. A. WARDER and F. R. ELLIOTT, Secretaries.

Genesee Valley Hort. Society.

This Society held its principal summer exhibition at Rochester on the 25th and 26th of June.

The display of plants and flowers was highly creditable to the contributors. The efforts of the managers of the Society have been liberally encouraged, and this was one of the best, if not the very best show of flowers and strawberries the Society has ever given.

There was a large collection of Summer Roses, Greenhouse plants, Floral ornaments, Boquets, &c., including many new varieties of Ornamental Plants.

The exhibition of Strawberries was one of the best that has ever taken place, both in the number and selection of varieties. and in the fine growth of the specimens. R. G. Pardee, of Palmyra, exhibited about 40 varieties, including all the best standard sorts. and many new ones procured for the purpose of testing. Among the latter was Jenny's Seedling, which has proved rather productive, and promises to be a fine fruit. Prince's Charlotte, of fine flavor—and small specimens of McAvoy's Superior, from late spring transplanting, showing a decidedly good flavor. Hooker & Co. presented 10 varieties; Bissell & Hooker 11 varieties, and three new seedlings of their own raising, one staminate, and two pistillate, of good promise and quite productive, well worthy of further trial. M. G. Warner, 6 varieties, mostly of the best standard sorts. George L. Southworth, Burr's New Pine and Hovey's Seedling, of very fine growth. M. Jewell exhibited four sorts. Ellwanger & Barry presented 10 sorts, besides seven of their new seedlings, but their flavor generally did not appear to be quite so well developed as last year. Dr.

Long had two sorts; A. Frost & Co. fine Hovey's seedlings, and Sheppard & Cherry 12 sorts.

As the results of their examinations, the Committee have been led to regard with much favor, the following varieties:

Burr's New Pine, best and most valuable for home cultivation; Large Early Scarlet, early, productive, and the most valuable fertilizer; Scarlet Melting, exceedingly productive and easily raised—flavor moderate, and too soft except for home use; Rival Hudson, for a late sort, and for market and preserving; Hovey's Seedling, and Crimson Cone.

Champlain Valley Hort. Society.

The first Floral Exhibition of this Society took place at Burlington, Vt., on the 20th of June. The exhibition room was worthy of a visit, for its great beauty. The fine arch at the entrance, covered with evergreens, interspersed with roses and other beautiful flowers;—the festoons suspended from pillar to pillar, and also along the walls of the room, with wreaths containing flowers; the beautiful devise of Flora, at the farthest end, with her green flowing mantle, with her skirt of variegated pinks, and the wreath of roses swinging from her hands, together with the initial letters of the name of the Society and the date of the day, all in beautiful form and in "sweetest green," made a room dressed and decorated, such as we are certain is not often seen in New England.

The display of fruits and flowers, more than realized the anticipations of all.

Prof. Thompson exhibited some interesting specimens in Entomology in order to show "the enemies as well as the products of Horticulture." Among these specimens, were the Curculio, the Apple, Peach, and Locust Borer, in their various stages of existence, from the larva state to the perfect insect.

Buffalo Hort. Society.

The Semi-annual Exhibition was held on the 29th and 30th of June. Owing to the unusual backwardness of the season, the display was scarcely so fine as that of last year—many varieties of roses not being in bloom, and cherries, with the exception of the earliest sorts, not being yet ripe. The Hall, however, presented a beautiful appearance, decorated, as it was, with wreaths of evergreens, interspersed with flowers, and having in the center a beautiful floral temple. Many new and rare varieties, both of fruits and flowers, were for the first time exhibited—and notwithstanding the many unfavorable circumstances with which the Society was obliged to contend, the Exhibition gave general satisfaction.

The display of Strawberries was large, and in the opinion of the committee, excelled in point of quality and variety, that of any former show.

Answers to Correspondents.

Raspberries.—*R. R.* (New-London, Ct.) Rivers' Everbearing Raspberry, does not continue to bear in this climate except it is planted on a *moist* soil, when it yields a good second crop in the autumn. Knevetts Giant is a better market fruit than the Fastolff—the fruit being nearly as large, and much firmer.

Evergreens.—*F.*, (Lancaster, Pa.) The American Yew, is a native of the middle states—grows in several places on the Hudson. It is not properly a tree, like the European species, but a spreading shrub, about 3 or four feet high, the foliage and berries quite ornamental. It loves the shade. You would have succeeded perfectly with the native Rhododendrons if you had taken the precaution to have made a bed or border for them in a shady place, and brought *leaf-mold* from the woods to plant them in. They will not grow for any length of time in common garden soil. *C.* (Boston,) The manure of the Lodi Company we found so well adapted to evergreens, is called by them simply "manure for shrubs."

Insects.—*A Subscriber*, (York, Pa.) The first Curculio comes out of the ground in the spring, just as the blossoms of the plum begin to fall. About three weeks after, the insect falls from the tree in the fruit, and goes into the ground—it comes out in a beetle form, according to some entomologists—while others say not till the next spring. At any rate, there are broods, less numerous than those in early spring, all through the summer—the later ones finding no fruit to sting, taking the young branches instead—and in the latter case the eggs remain in the branches all winter, and the complete insect comes out the following June. The insect flies at noon-day—but whether the male or female, or both, crawl up the trunk at first, is not known. *J. A. C.*, (Boston.) The insect you describe as boring the leading shoot of your evergreens, is probably the Pine Weevil. The insect comes out in a perfect state about the middle of August, and when the ends of the branches are infected, they should be cut off and burned before that time, to prevent the laying of more eggs. Wash the ends of the shoots, both in spring and mid-summer with a thick paint composed of soft-soap, and tobacco water, to prevent the beetles from depositing the eggs. Any well decomposed compost is good for evergreens—avoid fresh animal manure.

Half Hardy Trees.—*An Amateur*, (Richmond, Va.) All the pomegranates, both fruit-bearing and flowering varieties, will succeed with you if trained on a *north* wall or building, and the roots covered a foot deep with tan-bark in winter, and tops protected by a double matting. We do not think the Norfolk Island Pine will thrive out of a green-house with you. Cunninghamia sinensis is perfectly hardy south of New-York, and Cryptomeria even north of it.

Entrance Gate.